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#### LETTER FROM BARON VON LIEBIG TO J. J. MECHI.

If it is perceived that no country can perpetually supply another with corn, then must it be perceived that the importation of manures from another country must cease still earlier, since their exportation diminishes the production of corn and meat in that country in such rapid proportions that this decrease in a very short time manifestly forbids the exportation of manures. If it is considered that a pound of bones contains in its phosphoric acid the necessary condition for the production of 60 lbs. of wheat; that if the English fields have become capable, by the importation of 1,000 tons of bones, of producing 200,000 bushels more of wheat in a series of years than they would have produced without this supply, then we can judge of the immense loss of fertility which the German fields have sustained by the exportation of the many hundred thousand tons of bones which have gone from Germany to England. It will be conceived that if this exportation had continued, Germany would have been brought to that point, that she could no longer have been able to supply the demand of her own population for corn. In many parts

of Germany, from which formerly large quantities of bones were exported, it has already come to be the case, that these bones must, at a much higher price, be bought back again in the form of guano, in order to attain to the paying crops of former time.

The exportation of bones for so many years from Germany was possible only because the German farmers had less knowledge of the real nature of their business than the English, believing as they did that practice and science taught doctrines contradictory to each other, and were fundamentally different things, and that they must trust not in the laws of nature but in recipes. Things have now changed for the better, although not to the extent to be desired, for the German farmers do not as yet generally understand the value of the element of bones for preserving the fertility of their fields, not to speak of the restoration of their former fertility; for if they all understood this, still no one could have any more bones; at all events, no more than those which he brings to market in his grain and cattle.

The prices of bones have become so high in Germany as to forbid their exportation, and if the question should be put to English commerce, Whence it furnishes the English farmer with this to him so indispensable manure? the answer would produce astonishment, for this commerce has so far robbed all the inhabited parts of the earth, that the manufacturer of superphosphate can only set his hopes upon the phosphate lime of the mineral kingdom.

In relation to guano, I have been assured that in 20 or 25 years, if its use should increase in even the same proportion as hitherto, there will not remain in South America enough to freight a ship. We will, however, suppose its supply and that of bones to continue for fifty years, or even longer—then what will be the condition of England when the supply of guano and bones is exhausted?

This is one of the easiest of all questions to answer. If the common "sewerage system" is retained, then the imported manures, guano and bones, make their way into the sewers of the

cities, which, like a bottomless pit, have for centuries swallowed up the guano elements of the English fields, and after a series of years the land will find itself precisely in the condition it was in before the importation of guano and bones commenced; and after England shall have robbed the cultivated lands of Europe even to complete exhaustion, and taken from them the power to furnish her longer with corn and manure, then she will not be richer than before in the means of producing corn and wheat, but will, from that time forth, become even poorer in these means.

By the importation of guano and bones the population has, however, in consequence of the increased production of corn and meat, increased in a greater ratio than would have been possible without this importation of manures, and this population will make upon the rulers of the State their natural demand for food.

If men do not deem it desirable that the balance between population and the supply of food be restored by means of exterminating wars and revolutions (in which the want of food has always played a certain part), or by means of wasting plagues, pestilence and famine, or by emigrations *en masse*, then they should reflect that the time has arrived for getting a clear view in regard to the causes of the existence of the increase of population. A very little reflection will lead to the conviction that the relations of populations are governed by a great and comprehensive natural law, according to which the return, duration, increase or diminution of a natural phenomenon depends upon the return, duration, increase or diminution of its conditions. This law governs the return of the harvest upon our fields, the maintenance and increase of the population, and it is easy to see that a violation of this natural law must exert upon all these relations a pernicious influence, which can be set aside in no other way than by the removal of its causes. If, then, it is known that certain existing relations work deleteriously upon the fields, if it can be foreseen that their continuance must bring about the ruin of agriculture, if there is but a single one of all the means which have hitherto resisted this deleterious influence and made it less sensibly felt, which can be safely relied upon to secure a perpetual fertility to our fields, and it is certain that this means, by a simple change and improvement of the existing deleterious state of things, can be obtained, then it becomes us to think whether a nation should not summon up all her intellectual and material resources in order to preserve these fundamental conditions of her welfare.

It has been maintained that the recovering of the manure-elements out of the sewers in the large cities is impracticable. I am not ignorant of the difficulties which stand in its way—they are indeed very great; but if the engineers would come to an understanding with the men of science in relation to the two purposes—the removal of the contents of the sewers, and the recovery of their valuable elements for agriculture—I do not doubt that a good result would follow. Intelligence, in union with Capital, represents a power in England which has ren-

dered possible and practicable things of much greater apparent difficulty. I look forward with deep concern to the solution of the "sewerage question." For if this question is decided in Great Britain without regard to the wants of agriculture, we can scarcely hope for anything better upon the continent.

Permit me to add still a few words in relation to the leading article of the *Times* of the same date, in which the one side of this question is taken up with great clearness, while the author of the article seems to have views not quite correct in regard to its bearings as it presents itself to my mind. The mistake into which he has fallen arises from his confounding the condition of a State with that of its population.

In the natural sciences we know nothing of a State, of its might or its feebleness. We know only of lands, their geological formation, their climate and soil, and whether the soil contains the natural conditions for the subsistence of man and beast. In places where these conditions are abundantly present, and geological circumstances do not hinder their intercourse, men cannot be exterminated. The most wasting war cannot rob a land of the conditions which nature has given, nor can peace give them to a land which wants them.

If Mr. Layard is disposed to answer the question put to him in the article of the *Times*, he will doubtless say that the decay of the admirable system of irrigation rendered the permanent maintainance of a great population in Assyria and Mesopotamia impossible. Countries may be fruitful, and become capable of sustaining a large population when certain resisting influences, which in their unimpeded working make the cultivation of the soil impossible, are overcome by human intelligence; or when a land has all the conditions of productiveness except one, and then receives the one which it lacked. If Holland were without her dikes, which must be kept up at great expense, she would produce neither corn nor meat; the land would be uninhabitable. In a similar manner the inhabitant of the African oasis protects his grain fields by dikes against the storms of the desert, which cover his ground with a barren sand. I know that the prophets of future evil have at all times been derided by their own generation, but if history and natural law can furnish any ground whatever for a just conclusion, then there is none which stands upon a firmer basis than this: That if the British people do not take the pains to secure the natural conditions of the permanent fertility of their land, if they allow these conditions as hitherto to be squandered, their fields will at no distant day cease to yield their returns of corn and meat. Every man may picture to himself the state of things which will then gradually arise; but it does not belong to the province of natural science to decide the question whether the might and strength and independence of the nation can be maintained when this state of things shall have arisen.

Believe me, dear Sir,

Very truly and respectfully yours,

JUSTUS VON LIEBIG.

To J. J. MARCHI, Esq. London.

### CULTIVATING CORN.

Corn, if properly cultivated, will yield more than double the quantity per acre than is usually produced by the ordinary method of giving the crop a certain number of plowings, without regard to circumstances. In the first place, land thoroughly prepared before planting, is half tilled. Corn, planted upon land deeply broken up and thoroughly pulverized with the roller and harrow, is in the best possible condition to receive the subsequent tillage. The first dressing is best performed with the large harrow, drawn by two horses, walking with the row between them. To avoid injury to the young plants, the teeth that come on the line of the corn should be removed from the harrow; and with this view, it is important that the teeth be secured with nuts and screws, so that they may be removed with facility without injury to the teeth or the wood-work. One dressing in this way while the corn is quite young, and, if possible, soon after a rain, gives it an excellent start. This dressing should be followed at the proper time, either with the small turning plow, or, what is better, a shovel or bull-tongue plow; and run deep, affording a deep mellow bed for the corn roots to pasture in. The more deeply the soil is pulverized at this working, the greater amount of heat and air will be admitted to the roots of the growing crop: important requisites for early maturity and resistance to summer drought. The subsequent workings are best given with the cultivator; and this should always be run after a rain, and before the surface becomes dried to anything like a crust, whether there are grass or weeds to be killed or not. A light, mellow surface is always requisite; then the crop is in the best possible condition to resist drought, and a fair crop may be expected even in the driest seasons.

One word in regard to the construction of the cultivators, as we generally see them turned out by the manufacturers. In the first place, they are too heavy; and, in the second, the teeth, in order to work at the proper depth and with the greater ease, should be turned up considerably more from the centre to the point. The angle from the point to the middle, should be only sufficient to insure the necessary depth and draft. As the teeth are ordinarily made, presenting their whole front to the soil, they offer the greatest possible resistance, which renders it hard work for a horse to draw all day. With the teeth of the proper form and the points nearly flat, double the execution may be obtained; while the labor of the horse is mate-

rially reduced. The same remarks apply to the shovel-plows, as ordinarily made. The blade or shovel is altogether too upright to work with ease and efficiency.

With timely culture, the farmer may always keep ahead of the weeds. It is easier to prevent the weeds from growing in a ten acre field, than it is to exterminate the weeds upon two acres after they once get the start. Nor is the saving of this amount of labor all the advantage that is gained by keeping the crop clean; but the value of the increased yield is still more important.

It is poor economy to plant more land than can be cultivated well. It is better to raise 3,000 bushels of corn upon fifty acres of land than upon one hundred; because it better to expose fifty acres to wear and waste, than one hundred acres in securing the same amount of grain.

### MANUFACTURED AND ADULTERATED MANURES.

Perhaps there is no class of citizens more liable to imposition and fraud than the farmer. The merchant, the manufacturer and the professional man are constantly brought in contact with the operations of the commercial world; and, as but few articles required in domestic life at the present day are not subject to adulteration in some form, they are more readily detected by other classes of society than by the farmer, whose avocation brings him less in contact with parties thus engaged. But in the introduction of new varieties of trees, seeds, plants and manures is the farmer most liable to be defrauded and cheated by that class of sharpers who are now too numerous in the country, and who follow these vile practices for a living. We therefore deem it a duty that every agricultural paper owes to its readers, to expose this class of impostors in their attempts to defraud the unsuspecting. A case of this kind comes to our knowledge through the *Homestead*, published at Hartford, Connecticut, in the form of a report from Professor S. W. Johnson, of Yale College, and Chemist to the State Agricultural Society, on Mapes' Super-phosphate of Lime. The report is addressed to Henry A. Dyer, Esq. Corresponding Secretary of the Society. The report embraces the analyses of four specimens of super-phosphates and nitrogenized super-phosphates. But we have not space to give the report entire, nor does this individual case immediately interest our Western readers only so far as to expose the general tendency of the times to the practice of similar frauds in other articles—we therefore confine ourselves to a few extracts from the report, which the Professor introduces as follows:

"Of all the many fraudulent and poor manures which have been from time to time imposed upon our farmers during the last four years, there is none so deserving of complete exposure

and sharp rebuke, as that series of trashy mixtures known as Mapes' super-phosphates of lime."

The report then alludes to Mapes' improved super-phosphate seven or eight years ago, which it is stated was of good quality, and compares it with that now under examination. He also refers to some which was the subject of a former report. Prof. Johnson says:

"In my first report these manures were noticed in these words:—'It is clear that this brand is not to be depended upon; and the material that has come into Connecticut the past year (1859), is hardly worth a long transportation.'

"I now communicate analyses of four samples made the present year, and it will be seen that no improvement has taken place."

Then follows a table of analyses of the four samples, which appear in market under the following brands: "Mapes' Cotton and Tobacco Super-phosphate of Lime," "Mapes' No. 1 Super-phosphate of Lime," and "Mapes' Nitrogenized Superphosphate of Lime." The foregoing were all taken from 160 pound bags, and a sample from a one pound can, labelled also "Mapes' Nitrogenized Super-phosphate of Lime." The report continues:

"The agents for Mapes' super-phosphates are furnished not only with the article in bulk or in bags, of one hundred and sixty pounds each, but also with one pound samples put up in cans, which they are instructed to furnish gratuitously to any who are desirous of trying the manure.

"It was of course interesting to learn how closely these trial samples correspond with the material which purchasers receive; and, in case of the 'nitrogenized super-phosphate,' both classes of samples have been examined. The result is highly instructive, and shows that a small specimen of one pound in a can, worth at the rate of \$22 per ton, is to make the farmer swallow the 160 pound bags, the contents of which have the extraordinary value of \$13 per ton.

"Another remarkable feature to be noticed in the above analyses, is, that the three specimens taken from the 160 pound bags, and bearing different names, are, so far as their valuable ingredients are concerned, the same thing. The 'Cotton and Tobacco,' the 'No. 1,' and the 'Nitrogenized,' letting the cans alone, are equally good, or, I should rather say, equally bad! This fact proves that nothing is meant by the difference of names, except to confound the purchaser, and make him imagine that among this great variety of fertilizers, some one must be adapted to his field and crops.

"It is a well established fact that the tobacco crop removes a large amount of potash from the fields; and accordingly this substance was looked for in the cotton and tobacco super-phosphates, but it was not to be found."

It may be here remarked that, by analysis, the chemist can readily arrive at the real value of the article offered in market from the commercial value of the ingredients found in the manures analyzed. This value, compared with the price asked for the manures by the manufacturer or his agents, shows how much the farmer pays, for which he receives no equivalent.

The immense demand for concentrated manures, has led to the introduction of "manipulated" guano and a variety of other artificial manures, the real value of which can only be determined by chemical analysis; and this should be ascertained, and the result given to the public, in every State and market where these manures are found or suspected to have passed through any process of "manipulation;" and it is the duty of every State and local agricultural society in the country, to have these analyses made, and the results given to the public through their transactions and the agricultural publications of the day.

### THE GOPHER.

EDS. VALLEY FARMER:—When I emigrated to this country, I found the gopher, as I then thought, a very formidable little pest to many of the best interests and comforts of the farmer; being very destructive on gardens, young orchards, &c.

But experience and observation have satisfied me that they are not near so numerous or so difficult to get rid of as I at first supposed; but they are very industrious and quite destructive when let alone. They will not inhabit ground much tramped by stock; hence you never see their sign in a lot or yard kept for a stock-yard—and but seldom in a pasture much used. They are easily got rid of when taken at the proper time. They almost invariably come above ground every time there falls a very copious shower of rain; and, if it continues wet, they seek to change their location for a higher and dryer one. When this is the case, they are easily caught by taking advantage of the first fresh signs in their new place. Let a man make a good use of a spade, and the gopher can be taken in a few minutes.

A few years ago I left home on Friday, returned on Tuesday; and to my surprise gopher signs were to be seen nearly all over my garden, especially among my sweet potatoes. By the use of a small steel-trap, I was not long in catching a very large one; and to my astonishment fresh signs, with all further depredations ceased. And so in several other instances. Last spring was quite a wet one with us; hence the gopher was seeking higher and dryer locations. One morning I found their signs on the top of our dairy-house; but by the use of the spade he was soon arrested. And so, for two succeeding mornings, fresh signs were seen in my young orchard; and I am sure I was not more than ten minutes in taking each of them by the use of the spade.

This fall, while absent from home, one located itself in my young orchard; and had so extended operations that I thought a colony had taken up their winter quarters among my young trees. I despaired of destroying them by the use of the spade. I therefore resorted again to my trap; and, in a few hours, I found a large one safe enough, and all further signs ceased; and not one has since been seen in my orchard. I am therefore fully persuaded, that with a little care and prompt action, they may be easily destroyed, and much loss prevented.

Plattsburg, Mo.

P. F. H. A.



Written for the Valley Farmer.

### DISTEMPER IN HORSES.

BY HENRY CORBY, VETERINARY SURGEON.

Distemper, or as it is called by others, strangles, is that disease which causes the formation of an abscess or abscesses, usually between the branches of the lower jaw, but occasionally in other parts of the body; and the name strangles has arisen from the danger of suffocation or strangling, when the swelling attendant on the formation of the abscess is very great, and presses upon the upper part of the windpipe.

Young animals are more especially the subjects of this disorder; and though it is not confined to any particular season, yet it is more prevalent in the spring and autumn than at other periods.

In many cases the disease is comparatively trivial in its character; but sometimes, either from improper treatment or from neglect, it becomes so severe as to endanger the life of the patient. This severity of the disease may also depend on other causes than mal-treatment; certain conditions of the atmosphere rendering it almost an epidemic, and also increasing its danger.

It will be well to describe, first, the milder form of the disease, and then its more dangerous manifestations.

The early symptoms are those of slight cold; the patient is dull, its coat is rough and staring, its appetite somewhat fastidious, and it coughs occasionally; there is also a little discharge from the nostrils, and a swelling under the jaw. This swelling gradually increases in size, becomes hot and painful, softens and finally breaks; a quantity of thick white matter escapes, and then the abscess gradually closes, and the patient recovers. This is the mildest form of the disease and requires but little treatment; but at other times the cough is more frequent, the discharge from the nostrils more profuse, and there is great difficulty in swallowing from severe sore throat. Or there may be several abscesses formed, and then they are likely to be situated beneath the parotid glands; these glands extend from the base of the ear downwards to the angle of the jaw, and by their thickness prevent, for a long time, the escape of the matter confined beneath them. In this case there will be found swelling below the ear, either on one or both sides of the neck, with great difficulty in swallowing and breathing.

Abscesses may also form in other parts of the body, and this may depend on interference with the natural course of the disease by opening the swelling beneath the jaw, before the abscess has been perfectly formed. Such a course should therefore be avoided. If the abscess is slow in coming to maturity, let its formation be promoted by the use of some stimulating liniment, or the application of a blister; but by no means attempt to open it until, by its soft character, it is rendered certain that the suppurative action is finished.

This natural course of the disease is the guide for treatment. No bleeding or purging the patient is allowable; he should be kept in a

comfortable, yet airy, loose stall, and allowed nutritious diet. If there is great difficulty in swallowing from sore throat, give soft food, and apply a blister over and around the swelling. Medicine is not usually needed, and when a case of distemper requires its use, the services of a veterinary surgeon should be obtained.

So with respect to the great difficulty in breathing sometimes occasioned by the large size and peculiar situation of the abscess; if that is quite matured, it may be opened, though it is not soft at the surface; but if not matured, much harm will be done by cutting and attempting to liberate the matter.

In order to save the patient from suffocation, it will then be necessary to make an opening into the windpipe below the swelling, and to insert a tube through which the air may pass to and from the lungs, until the parts above are restored to health. When several abscesses are consecutively formed in various parts of the body, either from the too early opening of the original abscess, or from the mixing of some of the matter of that abscess with the circulating blood, the great thing to be done will consist in maintaining the strength of the patient by nutritious food, and giving, if necessary, tonic medicines. But if one of these secondary abscesses should form in any important organ, as the brain or lungs, no treatment can save the animal.

There remains but little to be said in reference to this disorder. It is not infectious, though commonly several colts on a farm will be attacked at the same time, as they have all been subjected to the exciting causes of the disease. And with reference to its prevention, so many circumstances in the changes of temperature, changes of management (as when a colt is first brought into work, or passes into the hands of a new owner), serve as exciting causes, that all we can say is comprised in the general advice to take care of young stock, avoid overwork and careless exposure to severe weather, for special preventives of this disease are unknown.

*St. Louis, Mo.*

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A SADDLE-HORSE CLUB.—A few gentlemen in New York city have established a saddle-horse club, for "the encouragement of the practice of horsemanship and of the breeding and training of saddle-horses. It is proposed to erect a club-stable and riding school where horses may be kept and both men and women may be trained in horsemanship. Their constitution provides for a semi-annual exhibition, at which premiums will be offered to the best rider and the best trained horse—racing not allowed. Every movement of this kind tends to the improvement of horses, and directly interests the farmer.—How much better to raise a good horse than a poor one, when its value in money is several times greater. \*

### EFFECTS OF THE NORTH WIND UPON STOCK IN TEXAS.

After the severe weather in the winter of 1856, and again in the early part of December, 1859, it was announced in the papers that large numbers of cattle and other domestic stock were frozen to death in Texas. From the large numbers that it was stated had died, we thought it a little strange if they were actually frozen to death in a climate so far South, when such occurrences were unknown in the more rigorous climates of the North and North-West. In the month of January of the present year, a gentleman called upon us, formerly a resident of Kentucky, but who, for the last six or eight years, has been engaged in stock raising in the south-western part of Texas, and gave us some account of the peculiar character of these winds in that country, and their effects upon the stock. He was out upon the prairies at the time that this wind prevailed with such power during the early part of winter. He says that the assertion that the cattle were *frozen* to death is a mistake—that the degree of freezing was not severe, but it was owing to some peculiarity in the force and nature of the wind that caused the death of the stock. He remarked that it was impossible for a man to ride and face the wind. The only safe course, when caught out, was to go with the wind and find shelter as soon as possible. Cattle and hogs seem to have some premonition of the approaching storm for some time before it sets in; and these animals will start and run to the full extent of their powers towards the woods or some other shelter; but many which were overtaken by the wind, were so chilled or affected in some other way, that they die upon the plains. This was a gentleman of more than common intelligence, and well versed in the business of stock raising. We had not to exceed five minutes conversation with him, which we regret, as we probably could have learned something more definite in regard to the effects of these remarkable winds.

In the March number of the *American Stock Journal*, a correspondent writing from Robertson county, Texas, gives some account of the loss of stock by the weather from the second to the fifth of December, in that country. He says: "The cows were seen hurrying away to the woods for shelter; the hogs were running hither and thither, some with straws in their mouths, prudently attempting to make themselves beds," &c. He further states that the number of cattle that have died in that country during the month, is at least two thousand. The num-

ber of hogs, as near as could be estimated, that had already died in the same county, amounted to near three thousand. And the total loss of sheep was about twenty-five hundred. One man lost five hundred out of a flock of seven hundred and fifty. Another, out of a flock of five hundred, lost three hundred. These, however, were sheep in poor condition from Missouri or from Mexico. If any of our readers are familiar with the peculiarity of these winds, and can explain the cause of their severe effects upon the stock of that country, we shall regard it as a favor if they will let us hear from them on the subject.

[Written for the Valley Farmer.]

### ON PLEURO PNEUMONIA.

BY HENRY CORBY, VETERINARY SURGEON.

The following extract, from the *Republican* of the 2nd ult. will show the importance attached to the disease now existing in Massachusetts, and is a sufficient apology for directing the attention of the readers of the *Valley Farmer* to the subject therein mentioned.

#### Epizooty.

The disease which has appeared among the cattle in several of the interior counties of Massachusetts, may, from all the statements in relation to it, be considered as calculated to excite alarm throughout the country. It has been very properly brought to the notice of the Legislature. On the 26th ult.,

"Mr. Brimmer, of Boston, presented the memorial of Messrs. Geo. B. Loring, Richard S. Fay and P. C. Brooks, Jr. a committee of the trustees of the Massachusetts Society for promoting Agriculture, urging the passage of an act for the removal and prevention of the alarming and fatal disease which now prevails among the cattle in certain portions of the State, a disease which it has been ascertained by the most careful investigation is identical with a destructive distemper which has swept through Europe for more than a century, and which has been considered there one of the most formidable foes to the interests of agriculture. The memorialists urge speedy action upon the same subject. The memorial was laid upon the table and ordered to be printed."

The resolves to prevent the spread of the distemper were afterwards taken from the table, and Mr. Jenks, of North Brookfield, offered a substitute bill. It authorizes the Governor, to appoint three commissioners, who shall visit without delay the place where the disease is known or suspected to exist, and who shall cause all cattle belonging to the herds in which the disease has appeared, or may appear, or which have belonged to such herds since the disease may be known to have existed therein, to be forthwith killed and buried, and the premises cleansed and purified, and make such order in relation to the further use and occupation of such premises as may seem necessary to prevent the spread of the disease.

The commissioners shall cause all cattle in the aforesaid herds, not appearing to be diseased, to be appraised before being killed, at what would have been their fair market value if the disease had not existed, and the value shall be paid by the State. Any person who shall knowingly disregard any lawful order or direction of the commissioners, shall forfeit a sum not exceeding \$500. The commissioners shall make a report of their proceedings to the Secretary of the Board of Agriculture. They shall certify all allowances and expenses incurred by them for the value

of cattle appraised, to the Governor and Council, and the Governor is authorized to draw his warrant therefor.

The act to take effect on its passage, and to continue in force one year and no longer.

The substitute was accepted and the bill was ordered to a third reading.

It appears that in May last, four cows were imported from Holland, two of which were in very bad condition when landed; one of them was killed, not because any infectious disease was suspected, but because its recovery was deemed hopeless and the second died in a day or two after; a third which seemed quite well when landed, died in about four weeks after the others, and since then twenty-eight cattle, of the importer's herd, have died from the same disease.

Three calves, a bull and two heifers were sold to another farmer, and one of these animals, a heifer, became affected about a month afterwards, in the same manner as those in the herd from which she had been brought; this animal also died, and subsequently others have been attacked with the disease and many have died.

One fact which I find in the *Massachusetts Ploughman* is worthy of special notice in connection with this part of our subject: the heifer which died was removed from her owner's farm as soon as the illness showed itself, and not one of his other cattle has become affected; but on the farm to which she was taken while suffering from the disease five or six have died, and others that have been sold from that farm, have been attacked after their removal, with the disease, and have either died or have been destroyed. Other cases have also occurred on the farms to which these animals were taken.

These facts seem to show that the disease originated with the imported cattle, and has been communicated from them to others with which they have been associated; and it becomes necessary to inquire whether the symptoms of this disease, and the appearances of parts of the body after death, are identical with the symptoms and lesions produced by any disease prevalent in Holland? In the case of the first cow that died we are told that she was much emaciated, and that there were many ulcerous sores on the surface of the body; but in the other case the symptoms have been those of disease of the lungs, viz: cough, and difficulty in breathing, with great dullness and weakness. The condition of the lungs after death is variously described; in some cases they are said to have been large and heavy; in other cases it is said that the cavity of the chest has been full of serum, which had compressed the lungs, so that they were much smaller than usual.

In Holland, Germany and England, two epizootic diseases have of late years affected a great number of cattle, one of these produces disease in the mouth and feet, and may therefore be left out of consideration, as none of these animals appear to have been affected in that respect; the other, *Pleuro Pneumonia*, affects the lungs and their covering, the pleura.

Both these diseases are there looked upon as infectious; but both also, like other epizootic diseases, spread independently of infection, be-

ing developed by certain atmospheric conditions, in animals that have not been exposed to infection from others that were diseased. They have existed in Holland and Germany for a very long time, but in England only about twenty years; there is, however, no proof that they were carried thither by imported cattle; they seem to have had there a spontaneous origin.

Beside these two diseases there is another to which I refer, because it is alluded to by some of the papers in connection with this disease among the Massachusetts cattle; on the continent of Europe it is known as *Rinderpest*, or cattle plague, and has also been called *Murrain*. During the spring of 1857, fears were entertained that this disease would spread to England, and Professor Simonds of the Royal Veterinary College of London, went on to the continent for the purpose of investigating the matter. He reported that the *Rinderpest* was a disease originating among the cattle of the Russian Steppes, and occasionally carried by them to other localities; but that it has not existed in central or Western Europe during the last forty-two years; being met with only in Hungary and Poland, into which countries Russian cattle are occasionally imported.

In the month of November, 1857, *Pleuro Pneumonia* broke out among some cattle in Australia, in consequence of the importation of animals from England, but does not appear to have spread beyond the farm where they were kept. It is an insidious disease, often producing great mischief in the lungs before any marked symptoms of illness are shown by the animals affected, and has proved very fatal, though with proper treatment it is not incurable.

The earliest symptom is a short cough, especially observable in the morning or evening, and if the animal be driven a short distance, it will breathe quickly and cough frequently. As the disease progresses the respiration becomes quicker, the cough more frequent and the appetite diminished; in milking cows the quantity of milk secreted gradually diminishes; the coat is rough and staring, and the action of the bowels irregular. At a later stage of the disease the appetite is quite gone, rumination has ceased, the animal lies down, is reluctant to rise, and moves stiffly; the breathing is hurried and difficult and the pulse quick and weak. It is very seldom that more than one lung is affected, and careful examination with the ear applied to the side of the chest will readily distinguish between the sound produced by the passage of the air through a healthy lung, and one in a diseased condition. As the disease gradually blocks up the air cells, so that no air can enter, all sound is lost, and percussion over the chest gives a dull, heavy sound, instead of the resonant sound of health. After death the affected lung is found solidified by the material deposited in its structure, very heavy, and when cut has a deep red color, alternated with white lines, producing a mottled or marbled appearance. The pleura or membrane covering the lung, is covered with effused lymph of a dirty yellow color, and often adheres to the wall of the chest, or to the diaphragm. The quantity of fluid in the chest is not generally

large, but in some cases four to ten quarts, or more, will be found.

I have somewhat more to say about this disease, especially with reference to its infectious nature, and the causes which produce it independently of infection; but this, with the treatment, must be reserved for another occasion.

*St. Louis, Mo.*

### THE IMPORTANCE OF STOCK ON THE FARM.

Much has been said and much remains to be said of the importance of stock to the farmer. In this article we propose to speak of stock on small and moderate sized farms devoted largely to cereal and farinaceous products. Large stock-raising farmers understand already the importance of stock to them; but many small farmers have yet to learn the almost absolute necessity of devoting a portion of their farm and time to animal products.

1. The first use of stock to the farm is to manure it. There is nothing more important than this. No farm will always bear the perpetual drain of a robbing culture. Vegetable products always taken off, continually wear and waste the soil. A portion of the soil is taken off with every bushel of grain, with every cabbage, potato, turnip; with every crop of hay, hemp, or fruit. Rotate crops as you may; plow deep, cultivate well, irrigate, drain, do all that can be done by the best modes of agriculture—you cannot keep up your farm always, without returning something to the soil you are thus exhausting. The best way is to pay the soil for everything you take from it year by year. Don't get in debt to your soil. Keep an honest account with it, and pay it all you owe it. So you will keep on good terms with your farm. But if you tax it every year, and return it nothing, it will begin to begrudge you your tax by-and-by, and give you less and less for your labor. Stock is the constant friend and daily enricher of the soil. Though it takes much from the soil, it returns much to it. The animal is the natural balancer of the vegetable creation. They mutually support each other. Each produces and prepares the food of the other. The animal and plant prepare both food and breath for each other. If the earth were robbed of its animals, vegetation would totally consume its atmosphere. The farm should keep up this natural balance between the animal and vegetable creation. Both the soil and atmosphere are thus preserved.

2. Stock pays well. This is an important

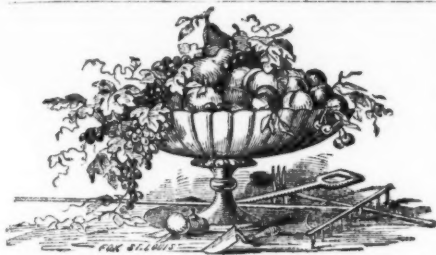
consideration. While it benefits the farm, it fills the pocket of the farmer. It is profitable in two ways: First, it pays directly by the sales of stock and meat year by year. It pays indirectly by increasing the vegetable products from the constant improvement of the soil. It requires less labor for the same returns; and, if properly cared for, is surer than any vegetable crop. Many vegetable products had better be consumed upon the farm by stock, for the double profit and benefit to the farm.

3. The farm will produce more by being well stocked. This is a fact not to be slighted. There are portions of almost every farm, that cannot profitably be tilled, from which stock will get rich crops of food. There are sloughs, corners, groves, by-ways, &c. which produce much for stock that would be otherwise lost. There are the waste and offal of harvests: straw, husk, chaff, refuse, which, if turned to a proper account with stock, becomes valuable. There are many kinds of roots, easily raised, good for the soil and valuable for stock. In many ways does a proper amount of stock on a farm increase its productiveness.

4. Stock is the surest product. Blight may destroy the wheat; a frost may cut off the corn; an insect may ruin the harvest; a drought may defeat the expectations centred upon the potato crop; almost every vegetable product may be so far ruined as to be unprofitable; and yet the stock kept along and made productive. There are many ways to care for stock through an unfavorable season. The profits of stock is a sort of extra harvest—an eleventh hour income that adds not a little to the net profits of the farm. Take it year by year, the profits of stock, if properly cared for, will be much more uniform than those of any other product of the farm. But to be so one thing must be strictly observed—it must be raised and managed according to the principles of good husbandry. Observe these, and stock is the farmer's reliable friend. \*

A MINIATURE HORSE.—Captain Trecartin, of the ship *Henrietta*, recently brought from Leghorn to New York a horse of miniature size. It is a coal black stallion, seven hands high, of fine form, smooth coat and long tail and mane. We had a similar horse a year or two since in St. Louis, an elegant specimen of a fine draught horse in miniature. The horse varies in size almost as much as the dog. And this great variety in size, strength and fleetness, adapts him to the many services required of him as the faithful servant of man. No animal, as a beast of burden, bears any comparison for usefulness to the horse. \*





## HORTICULTURAL.

### CAROLINA AND NEW YORK PIPPIN APPLES.

At the annual meeting of the Illinois State Horticultural Society, held at Bloomington, on the 10th of January last, a committee was appointed to recommend a list of twelve best varieties of apples for cultivation in the northern, central and southern portions of the State. In the list for central Illinois the *New York Pippin* is the last named variety. The list closes with the following note, viz: "This latter was, after much debate, voted by the Society to be known in future as the '*Carolina*.'"

An apple has long been cultivated in Kentucky under the name of the *New York Pippin*, but we know of no apple in New York, nor in the books by that name. As near as we can recollect the history of this apple it is as follows: Jo. Allen, of Breckenridge county, or his brother, Col. James Allen, of Nelson county (both nurserymen at that time), saw the apple in the market at Philadelphia, Pa. Its handsome appearance induced him to inquire of the woman who had them for sale, its name. She called it the *New York Pippin*. The inquirer obtained some grafts of the kind that produced the fruit, from the woman who sold the apples. It has since become quite a popular market apple. It is considered here by some as a first-rate fruit, but in quality we do not rank it so high. The tree is a thrifty grower and a good bearer; the fruit in size is from medium to large, but its productiveness and showy appearance, constitutes its chief merit as a market fruit. This is a winter apple.

We also have an apple here known as the *Carolina*, a winter apple, and is another favorite with the market men, because of its large size and attractive appearance; but it is a coarse tough fruit, of inferior quality, but will cook tender. The color is a dull red. The tree possesses the peculiar property of casting its bark much like the sycamore tree.

Whether the *New York Pippin* alluded to by the Illinois Horticultural Society is the fruit that has so long been grown here under that name we do not know, but presume that it is, as it is highly esteemed as a market fruit; but the *Carolina* is as widely known, and was at one time as highly esteemed, though far inferior to it in quality. From these facts the naming of another fruit "*Carolina*," will tend to create confusion among cultivators. We now have one apple, distinguished as a valuable early fruit, known as the "*Carolina June*." Whether the apples referred to by the Illinois State Society are the same that we have described or not, such names do exist among us in this section of the West. We would suggest, therefore, that the Society at its next meeting reconsider the matter, and adopt some other name.

The *New York Pippin*, of Kentucky, is probably known where it was originally obtained by Mr. Allen, among intelligent fruit growers under some well known name, but change of location has probably changed its appearance so much that it has not yet been fully recognized.

### PRUNING FRUIT TREES IN THE NURSERY.

A young nurseryman requests us to publish for the instruction of those inexperienced, like himself, the time and extent to which young fruit trees should be pruned in the nursery.

With care and watchfulness it is an easy matter, requiring but little labor, to give young trees any desired form consistent with the nature and habits of the varieties cultivated. Similar treatment is required for the different varieties of fruit trees. Stone fruits are usually propagated by budding. Peach and other stocks should, when possible, be budded in the fall of the same season they are planted; the bud should always be set as near the ground as possible. The following spring, just as the bud begins to start the stock should be cut off. Our practice always has been to cut at once down to the bud, sloping backwards from it. Some nurserymen leave six inches or more of the stock above the bud to tie the young shoot to, in order to prevent its being broken off by the wind; but we have never experienced any serious loss from this cause when cutting at once down to the bud, which is done with one-third of the labor that is required in making a second cutting. We practice the same method with all budded stocks. Shoots spring out very rapidly from the stock after the top has been cut off. It is important that these be rubbed off early in order

to throw the entire strength of the stock into the bud. It is desirable to secure as stocky a stem to the young tree as possible, and hence peach trees should not be pruned until near the close of the growing season. It is better not to prune all at once, but in August or the forepart of September a tier or two of branches may be cut off, and by the middle or last of the month the second and last pruning may be given, removing all the side branches up from eight to twelve inches from the ground. When the pruning is done at the season named, the wounds have time to heal over, and the tree will harden and mature its wood before frost sets in. The following spring, peach trees are of suitable age to remove to the orchard; and after being set, the side branches should be shortened to two or three buds and the main stem cut back to within twelve or eighteen inches of the ground. Plum and pear trees should grow two seasons after budding before they are set in the orchard.

Apple trees being propagated both by root grafting, and budding require to stand two years in the nursery before being removed to the orchard. In pruning apple trees some nurserymen commit a serious error by pruning up the stem too early and too high. This is often done by rubbing off the young shoots soon after they start in the spring, up to half the height of the tree or more. These may be rubbed off, say six inches from the ground. More than this causes the tree to run up a mere switch, to an undue height. It is the side branches that give size, strength and a proper proportion to the stem. One or two moderate prunings should be given about the middle and near the close of the growing season; but this, at no time, should be extended beyond one quarter the height of the stem. Trees pruned up to a slim, straight stem are more easily handled and packed in the nursery, but they are unsuited for the orchard, particularly for sections of the country open to the full sweep of the winds. A tree with a short, thick stock and low head is the most desirable form for all situations, and this can only be perfectly given in the nursery. Apple trees, like those of the peach, should be headed back, when transplanted, to a height not exceeding two feet for the upright growing kinds. Those of a more spreading habit, like the Yellow Bellflower, Pennock, &c. may be pruned to three or three and a half feet high.

Standard pear trees should not be pruned higher than twelve inches from the ground; and dwarf pears should begin to branch not higher than six inches. Cherry trees for our

climate and soils generally should be made to branch from the ground, as the stem, when exposed to the direct rays of the sun, will hardly survive beyond half a dozen years, except, perhaps, some of the more hardy, inferior sorts.

### FRUIT GROWERS' SOCIETY OF WESTERN NEW YORK.

The winter meeting of this society was held in Rochester on the fourth and fifth days of January, 1860. All the counties of the western portion of the State were represented by the most prominent fruit growers. In the discussions, much valuable information of a general character is given. This being the result of long practical experience in a section of the country that stands foremost in the richness and perfection of its fruits, we propose to give some of the most important facts set forth by the members, which will be worth a volume of the empty discussions from merely theoretical cultivators.

Mr. A. Pinney, of Clarkson, and W. P. Townsend, of Lockport, both widely known as among the most successful fruit growers, spoke of the great productiveness of the Louise Beune of Jersey pear. The latter gentleman said, that from an experience of 25 years this sort would bear three times as many as any other pear. He would plant dwarfs rather than standards—placing them near together—and would cultivate the *whole surface* and keep it thoroughly stirred, *as often, at least, as once in two weeks*. The best sorts as dwarfs, he thought, were Louise Beune of Jersey, Virgolien (White Doyenne), Angouleme, Beurre Diel, Winkfield, and for summer, the Doyenne d'Eta. The Flemish Beauty was also a very fine grower. One gentleman thought this to grow better than any other sort, when once well established.

G. Ellwanger named the following sorts as never succeeding on the quince, viz: Bosc, Autumn Paradise, Sheldon and Dix, and several others that succeed but imperfectly. But all the fruit grown on dwarf trees is invariably finer than when grown on pear stocks. One gentleman thought it would not do to recommend dwarfs to farmers, because they could not give that amount of cultivation necessary to secure success. S. H. Ainsworth, after speaking of the difference in the productive capacity of some varieties over others, and all bore better fruit on the quince than on the pear stock: The Louise Beune of Jersey, on the quince, would produce fruit double the size and of superior quality to

those on the pear. The whole secret in raising dwarf pears, is, first to get the right sorts (which are few), and then give *thorough cultivation*. The trees must be properly pruned, and cultivated *broadcast as often as once a week*—of course, by horse power. With this treatment, success will be certain. The Angers quince, as a stock, was the only one that he had succeeded with.

T. G. Yeomans stated that he had 140 trees of the Angouleme on one-third of an acre. They yielded about 30 barrels. Of these, five barrels were blown off by wind, and sold at six to eighteen dollars a barrel. But the best six barrels sold for *one hundred and fifty-six dollars*, or \$26 per barrel. The whole third of an acre yielded him five hundred dollars. The trees are planted ten feet apart, and cultivated by horses, at much less expense than cultivating potatoes. The best barrel was filled with 166 pears. His crop for next year had already been applied for.

G. Ellwanger stated that the fruit he had sent to market at New York, sold from \$16 to \$20 per barrel; and, from the experiments already made, he thought that eight or ten year old trees, with good cultivation, would yield an average per annum at the rate of a thousand dollars per acre, and that this variety would produce twice as much money from the same land as any other sort.

Various other matters of a more local character, connected with the cultivation of various other kinds of fruit, were spoken of. The comparative merits of *apples, pears and small fruits for market*, by skilful cultivators, occupied a considerable share of attention. P. Barry said the proper estimate of their merits depended greatly on circumstances. Near a city, small fruits would doubtless be most profitable. For a distant marketing, by barrelling up the fruit, larger and longer keeping fruit will be best. In some places the soil may be best for *pears*—in another, *peaches* may be most profitable—in others, again, *apples* may be best. Apples, if good, always have a ready sale. In Niagara county, the apples sold amounted to half a million of dollars a year. Where the soil is right, pears promise the highest profit, notwithstanding that terrible malady the fire blight, and the various accidents to which this tree is peculiarly liable. He thought the pear promised higher remuneration to skilful cultivators, on proper soils, than anything else. For farmers, the apple promises the best. Some who had but four or five acres of good orchard, of the best winter apples, had realized more from this small area than from all the rest of their farms. The crop

fails less frequently than some of the most common farm crops; and from the fact that in a large portion of the country elsewhere good apples could not be raised, he thought the market would not be over-stocked. In answer to a question, he said the pear was a more certain crop than the apple—indeed, it bore every year without exception.

W. B. Smith thought that, with good cultivation, for the first ten years, more pears could be raised from an equal area than of apples. He also alluded to the constantly increasing price of pears in market.

S. H. Ainsworth stated one prominent advantage possessed by the pear. The trees, if properly cultivated, never failed in a single year of producing good crops; while the apple does not afford a good crop only about one-third of the seasons. He was strongly in favor of *standard pears*—had found the young trees, on an average, to bear a bushel of fruit sooner than apple trees set out at the same time. And, as there might be 160 trees on an acre, and the crop more certain, they were vastly more profitable. They need, of course, good cultivation; but this need not cost so much as the yearly cultivation of grain.

P. Barry spoke on the subject of offering winter pears for sale in market. He said that more than triple the price might be obtained by the grower, by attending to the proper ripening, and forwarding them to the dealers a few days before full maturity. Doubtless, when they became more abundant, houses would be fitted up in the cities where this could be done on a large scale with great perfection.

The important facts here set forth by some of the most experienced fruit growers in the United States, in regard to varieties, importance of a thorough and constant system of cultivation, mode of ripening, &c. will, if regarded by our readers who are engaged in fruit growing, prove of essential service to them.

GUANO.—It is hardly twenty years since the introduction of guano into England, and a considerable period elapsed before it was extensively used; and yet, during the ten years ending 1857, the English farmers expended more than *one hundred millions of dollars* in its purchase. The sum expended during the same period in the United States, does not equal this; yet it is enormous. By careful estimates, it is determined that in twenty-five years more the entire supply of guano in the world will be exhausted. These facts should admonish farmers to husband every material that may serve as a substitute for guano, so as to render its use at a future period unnecessary.

### TREE PEDDLERS.

MESSRS. EDITORS:—I confess to a feeling of satisfaction, at the able, fearless and truthful manner, in which your correspondent "Westerner," in your last volume, exposes and drags to light the tricks of those traveling impostors, calling themselves tree agents, though in reality, vendors or peddlers. The writer in the *Southern Homestead*, too, well exposes and lays bare, some of their many practices, that "Westerner" had left out. They both write like those who *knew*, having probably felt, by bitter experience, what it is to deal with such men; and though they have told some severe and telling truths, the picture is not a whit overdrawn. Indeed, the half is not told, nor can it be in the limits of a single article, nor in a half a dozen.

These peddlers are irresponsible and unreliable to the last degree; for, though some of them have catalogues of well-known Eastern nurseries from which they pretend to sell, and whose agents they profess to be; yet the majority are mere traders, or dealers, as some of them have confessed to the writer—buying whenever they can buy cheapest, without regard to quality or correctness, and selling, of course, at the highest price they can get. They, of course, can not be held to account, because they are not to be found when the fraud is made manifest, and their pretended employers disown them, taking especial pains to have it known, that they have *no traveling agents at all*. Where, then, rests the responsibility, or from whom is the injured purchaser to seek redress. Verily, nowhere. He must grin and bear his own losses as best he can, resolving, as he will be sure to do, never to have anything more to do with the swindling rascals.

Among the many instances of fraud and deception that have come under the writer's observation, I will relate one, that happened in your own county, and almost under your own eyes, and which will serve as a sample of many others:

A widow lady built herself a neat suburban residence last Fall, a few miles only from your city, and on some property she owned there. Of course she wished to improve her grounds around the house, plant some fruit and ornamental trees, &c., but, being unacquainted with these matters, she unfortunately fell into the meshes of one of those gentlemen with smooth, oily tongue and polite address, who professed to be a landscape gardener, nurseryman, &c. After partaking extensively of her hospitality, and ingratiating himself into her good will, she unwisely gave him an order for trees and shrubs, leaving the selection and quality to him. Well, about the last of April or the beginning of May, along come a lot of trees in boxes, which proved to be Mr. Tree Peddler's order for the lady, and when everything was out in green leaf here, her whole plantation had to be made. The boxes were unpacked and some of the plants were found to be dry and dead, or nearly so, from their long journey, bad packing, &c. Others were too moist, and had grown from several inches to a foot, others rotten and so on. Well, the best that could be done with them was done. They were planted out, many lived

—some died, and many more would have died, but for the remarkable favorableness of the season.

Sometime along in June, around comes the peddler, with the modest little bill of over \$625, which he presented to the lady and requested a settlement forthwith, as he was anxious to return East immediately. The lady, of course, was startled at the magnitude of the bill, and asked time to consider, and on instituting inquiries, found that she had been charged with many things she had never received. By the advice of her friends and neighbors, she very properly refused to pay it, but expressed an entire willingness to pay a fair price for everything she had received, but was not willing to pay for what she had not received, or an exorbitant price for what she had, and she proposed to settle the matter by arbitration. But, no! Mr. Peddler would hear of no such thing, and the lady would consent to no other, and so there the matter rested, the last the writer heard of it.

To say that he had charged from 25 to 50 and 100 per cent. for his things, over prices that the same articles can be purchased at here, will be keeping quite within bounds; and I quote a few articles from memory to prove and substantiate what I say. For instance, \$4 a piece for Balsam Fir and Norway Spruce, about as many feet high—and meagre, sickly-hued specimens as that; \$1 50 for Hemlock perhaps two feet high, but evidently recently from the woods, having neither shape nor form, but had to be tied up in a bundle like a sheaf, to keep them from laying sprawling on the ground; and so on through all the evergreens. Again, seventy-five cents each, for very ordinary specimens of ornamental trees, as maples, elms, &c., which could easily be bought here for fifty, and some twenty-five cents each. Fifty cents each for some kinds of shrubs, which could be bought in any quantity for twenty-five cents. One dollar each for very ordinary varieties of roses, in quantity, too—budded at that; the buds of half of which were dead and the stock growing up, and even that more dead than alive, so weak was its growth. Five dollars a dozen for unnamed dahlias. In the fruit trees—thirty cents each for peach trees, which could barely start below the bud, the latter being dead; two dollars each for Diana, Concord and Lenoir grapes, not so large as a quill pen. These are only a few of the items of prices, &c., that occur to memory, but the whole was in keeping with the above, all being more or less exorbitant.

I think these recitals ought to be sufficient to open the eyes of our amateurs and tree planters, to the gross outrages practised on them by those perambulating Eastern sharpers; and that if they longer submit to them it will be their own fault. They will have nobody but themselves to blame, if, with their past experience, they continue to patronise these itinerant Eastern gentry at all. And you are but doing your duty to yourselves—your readers and your section of the country, Messrs. Editors, in giving publicity to the complaints made by the unsuspecting and unwary in these matters.

Yours truly,  
A ST. LOUISIAN.



### THE CURCULIO AND BLACK KNOT IN PLUM AND CHERRY TREES.

It has frequently been intimated that the black knot in plum and cherry trees was caused by the curculio. Believing it possible that these excrescences may have been caused by some insect, yet, in the absence of positive proof we have hardly been willing to attribute them to the curculio. But recent observations by Miss Margaretta H. Morris, of Germantown, Pa., who has long been distinguished for proficiency in Entomological research has clearly established the fact that the destructive curculio, or true plum weevil is also the author of the black knot in plum and cherry trees; and this explains what has heretofore been a mystery to us, viz: by what means the race of this insect is perpetuated in seasons when its favorite fruits are entirely cut off by Spring frosts, as is frequently the case in the South and West, and often several seasons together.

In the *Horticulturist* for November, 1859, Miss Morris furnishes a statement with full illustrations of the insect and the effect of its operations upon the branch of the plum as well as its attack upon the fruit. She detected several larvae of the curculio in a recently formed tumor on a branch of a tree. These she placed under bell glasses, as also similar insects taken from the fallen fruit, all of which, after a few days came forth perfect insects of the true curculio species. These experiments were repeated, so that there remains but little doubt as to the correctness of her conclusions. But still there is something mysterious about this disease of the tree, for in certain sections of the country the enlargement of the branches of the plum and cherry trees become so extensive that in a few years the trees are entirely killed, while in many sections of the West where the curculio is more destructive to the fruit than in the other sections referred to, our Western trees are seldom attacked in the branches by them. Our winters are milder and our soil lighter, and in every way favorable to the full development of this insect in great numbers, and the trees are comparatively exempt from this form of disease. We should be pleased to receive the views of some of our observing fruit growers on this point.

**VALUE OF OUR FOREST.**—The *Baltimore Exchange* says:—"Those persons who have been accustomed to regard the pine forests of the South as of little commercial importance, will be surprised to learn that the annual value of the hewn timbers, the sawed plank, boards, scantling, resin, pitch, and turpentine, is estimated to be not less in the aggregate, than from twelve to fifteen millions of dollars." This estimate is probably far too low for the present, and certainly falls far short of what may be expected in a few years, when the fact is demonstrated that no point where timber is abundant is inaccessible to the wants of commerce. It appears that the forests constitute not only the staple product but the real wealth of North Carolina. Her tar, pitch, and turpentine, are used in every corner of the globe. The amount shipped to England during the year 1859 is valued at \$2,176,870.

[Written for the Valley Farmer.]

### MONTHLY HINTS FOR THE GARDEN.

BY CAREW SANDERS.

M A Y.

The first week in May is usually the proper time to begin planting out bedding plants. Though many, either from ignorance or impatience, will venture out Dahlias, Heliotropes, Salvias, and other tender things, sometimes as early as the middle of April. But the chances are that they will get entirely killed by a late frost, or so retarded as to set them back far beyond the usual time for them to be in good bloom. There is nothing gained by thrusting out the tender denizens of the green-house or hot-bed too early.—The soil must be allowed to get well warmed up, and all danger of any considerable frost over—which will not be in April. Set out the Verbenas first, which are tolerable hardy, and will bear a few degrees of frost, though they often get sadly checked and turn a sickly blue, by being out too early.

The Antirrhinum, Pyrethomum, Nierembergia, Abutilon, &c. may also be set at the same time. Next may follow the Cuphea, Petunia and Geranium; and, lastly, the Heliotropes, Dahlias, Salvias, and all the most tender kinds that are left. From the second week to middle of May, is as early as those can be safely ventured out for them to do well.

#### THE FARMER'S KITCHEN GARDEN.

It is to be regretted that among farmers generally so little attention is paid to gardening.—The farmer's garden is too often left to the care of women and children, and if any work is required to be done in it by stronger hands than theirs, it is too often put off from time to time, with the exclamation, "Oh, we are all so busy now, we can't be bothered with the garden." Or if the labor is given at the request of some dearly loved wife or sister, it is perhaps grudgingly bestowed, and some inexperienced man or stable boy sent to perform the unenvied task.

So great, in our opinion, is the value of a garden, well stocked with vegetables of every kind, that if too busy to attend to it ourselves, we should not hesitate to employ an experienced hand, even at considerable expense, to put it into proper order every spring, after which the care of the garden and cultivation of the plants in it would become a source of pleasure as well as profit.

If there are some "big boys" in the family, it is a good policy to consign the care of the garden entirely to one of them, and as an incentive to attend well to it, purchase for him a good stock of garden tools, seeds, and one or two good practical works on horticulture, and allow him to sell the surplus vegetables not required for family use to whom he may.

What is the mere value of money in comparison to having health and enjoying the comforts of civilized life, towards which nothing conduces more than having the table plentifully supplied with wholesome vegetables, both summer and winter.

The farmer's kitchen garden is too often an obscure patch somewhere out of sight, at the back of the house, where all the slops are

thrown—the clothes hung out to dry on the few currant bushes growing there—the fowls allowed to scratch for a living in summer, and the hogs to root in autumn and winter. What wonder, then, if it becomes the nursery ground for weeds, and is an eyesore to the place? Better plow it up at once, and seed down to grass, than allow it to remain thus. Others, again, with every disposition to do justice to their garden, yet turn it into an orchard, by filling it with fruit trees, which are well enough while young and small, but when they grow into the goodly proportions of maturity they shade the ground so much that any attempt to grow vegetables under them ends in failure from the want of light and air; the embryo horticulturist becomes discouraged, and gives up gardening in despair.

But there are some and we hope numerous exceptions to the pictures we have just drawn. We have seen farmers' gardens that were a real pleasure to visit—where every vegetable that climate would admit of grew in abundance, and where the useful and ornamental were so well combined that the eye could detect no fault; surrounded by a close board fence, neatly painted or whitewashed, and trained with vines on the sunniest sides; the walks nicely graveled; the soil well drained and cultivated; the beds kept neat and clean, and not a weed allowed to bloom, nor when rooted out allowed to block up the paths, but removed at once to the rubbish heap in the stable yard.

It is of importance that the soil of a garden should be rich, deep and well drained: if not naturally so, no pains should be spared to make it so.—[J. M. in *Country Gentleman*.]

### MERAMEC HORTICULTURAL SOCIETY.

SUNHILL, MELROSE, 5th April, 1880.

The sixteenth monthly meeting was held as above. The President in the chair. A bouquet was presented by Mrs. J. C. Blakey, of Verbenas, Heliotrope, Geranium, Spirea, Mignonette, Thalspi, Salvia Splendens, Narcissus; and a bouquet by Mrs. F. W. Braches, of Galla or Richardia Africanus, Iris, Narcissus, three varieties Hyacinth, Double Flowering Almond, Heliotrope; and by Mr. Votaw, two varieties Turnip and Blue Kidney Potatoes, and Iron Corn; by the Secretary, Chinese Potato, DIOSCOREA BATATAS, and bulbs of same; by the Chairman, bottle of Catawba Wine of vintage of '53.

Minutes of former meeting were read and approved. The following resolution was omitted in the minutes of last meeting: Resolved, that this Society hold a fair in the month of September next, and that the Executive Committee furnish a premium list to the next meeting.

The Corresponding Secretary reported having received two communications from Professor Swallow, and copy of Geological Survey of the South-West Branch Railroad. Also from the St. Louis Gas Co. on gas lime. One from Mr. W. Brown, of Allenton, detailing experiments with the potato; one from Geo. Husmann, Esq. of Hermann.

On motion, resolved, that any member offering a resolution, shall furnish the Secretary with the same in writing.

The President announced the following Standing Committees, viz: On FRUITS, L. D. Morse, Francis Becker, O. Kittredge; on FLOWERS, Wm. Muir, F. W. Braches, J. C. Blakey; on VEGETABLES, T. R. Allen, L. D. Votaw, P. Airey.

Information was requested upon the articles presented on the table. Mr. L. D. Votaw said both the varieties of turnip had done well, were tender, firm, and kept well. The Iron Corn was the earliest ripening field corn he had seen, and highly valuable on that account. The Blue Kidney Potato he had known for fourteen years. Last year he raised ninety-three bushels from one bushel of seed. Last year he broke his ground early in March, let it remain till June; plowed two furrows deep with the shovel-plow, and planted on the 12th June, 18 inches apart and 3 feet between the rows. He believes in level culture; never hills; gives very little cultivation to the crop, but prepares his ground deeply and thoroughly; keeps the weeds down, and stirs the soil as little as possible after blooming. This potato is better in the fall than the spring.

The Secretary stated that the Chinese Potato, or Dioscorea Batatas of the botanist, had been grown by him for three years. The sample on the table was under medium, it was so difficult to get the plant up entire. This potato was one of two hundred sets he planted in a bed dug three feet deep, and planted twelve inches apart each way. The sets were small pieces from any portion of the potato; but economy pointed to the neck being used for seed, and the lower part of the tuber for the table. He gave no cultivation whatever, but pulled out the weeds as they appeared. The stem and leaf were like a common convolvulus; and the blossoms were small panicles like the blossom of the grape vine, but smaller. These produced the small bulbs now on the table, which, when mature, fell on the ground, and immediately commenced penetrating the earth and forming independent plants. From the two hundred sets he got 2,491 bulbs, besides the potatoes; which, after removing the upright inches which withered away during the winter, gave an average length of 26 inches, and 2 inches in diameter. The experiment with 200 sets, gave an average of 16,335 lbs of nutritive matter to the acre. He has some plants two years in the ground, and will let them remain for four years to see how long they will increase in size. The China potato is of a bland, nearly tasteless character, very albuminous; and cooks very dry and mealy. Has been much relished plain boiled, baked, fried, and makes a pudding equal to sago, corn, starch, or anything of that class. Has one objection—the immense amount of labor required to take them out of the ground—but it will certainly remunerate; and the condition in which it leaves the soil is invaluable.

The meeting then adjourned for dinner.

The afternoon session was opened by the testing of the Catawba wine of Bogen's vintage of '53, by the Executive Committee and the meeting generally. The President announced, that in reference to some statements made at last meeting in regard to the Catawba not improving by age, when in Cincinnati last month, he made inquiry among a considerable number of the growers, who said that this was in general true, but that the vintage of '53 was to a large extent an exception.

Mr. F. W. Braches found, that in seasons where the grapes had to be gathered before being fully ripe, the keeping qualities of the wine were impaired. In Germany they liked a little touch of frost to improve the quality; but here it injured it.

The subject for the day, POTATO CULTURE, was then taken up, and the following letter was read from Mr. W. Brown, upon an experiment he made last season. He said:

"The ground was new and rich, rows 2½ feet apart seed twelve inches apart in the row. I had at the rate of 300 bushels per acre. Part of the seed I planted whole, and a portion I cut, keeping a slice off the top end separate from the remaining part, which I also planted separate. As the result of this selection, I found but little difference, except that the rows planted with the seed from the top end matured first. The rows planted with the whole seed, produced one-fourth more than those planted otherwise. This last experiment I have tried before, with the same result."

Dr. Morse remarked, that the potato crop he considered second to none except wheat and corn in importance. Its value as an article of diet was hardly understood. Physicians always found that when the potato crop was short, or inferior and high priced, there was an increase in the amount of disease, especially of those of the nature of scurvy. It is a crop with which we are all familiar, and yet one in regard to which we have the fewest facts. Every one had his own method. Some planted deep, some shallow; some with manure, some without; some plant whole potatoes, some cut ones, and some only eyes. He wished to call the attention of the Society to the importance of obtaining facts by repeated experiments. When a boy twenty years ago, his father's method was to plant in hills three feet apart, and one whole potato in a hill; and he raised 400 to 500 bushels to the acre of the long Pinkeye. I have this spring planted in hills three feet apart each way, using whole potatoes and one in a hill. One thing that will help to improve the potato, is the getting new varieties from seed.

Mr. Votaw has had considerable experience in the cultivation of the potato. Thinks the Neshannock is the best. Has never found potatoes planted from an early crop pay. Cuts the large potatoes into four pieces lengthwise. Prefers planting in hills and plowing them both ways, keeping the hills flat or ditching to receive the rain. In general the potato crop is most injured by the drought. To prevent this, plow deep, plant deep (at least six inches), and keep them clean while young. The best crop he made was planted the 28th and 29th June. Last year commenced planting the first June, and planted every eight or ten days till the 3d of July. The last planted were the best crop, but not the largest potatoes. Prefers hills rather than drills. To get large potatoes, plant 3 to 3½ feet apart.

Mr. Braches was raised upon a farm where potatoes was the staple crop. Finds that potatoes grown in light, sandy soil, better in crop, flavor and size, than on clay soils. If you consider the nature of the potato, you will find that it puts its sprout down and then up, and forms the blossom before it forms the tuber. The tuber is not the root but an appendage. Before it begins to bloom, you cannot stir the soil too frequently, or keep it too mellow. After it has set the blossom, it commences to form the tuber, and every disturbance of the soil causes it to form more root and retard the formation of tuber. Consequently should have the ground perfectly clean and mellow before you put in your seed. Keep it clean in the early stages of its growth, and you are quite sure to make a good crop.

Mr. Steines thinks there is no necessity for changing the seed so often. I have cultivated the same variety for twenty-five years, and they are as good as at first. I plant in drills three to four feet apart, and they do well; and leave the ground so loose they could be dug with the fingers. Covers six inches. Have raised 150 bushels on half an acre. Never work after they blossom. Plant the second week of June. Cover with the hoe.

Mr. Braches has found more crops of potatoes ruined by being left in the ground after they were ripe, than by any other means. They are not only liable to frost, but to become wet and inferior. To keep them in perfect condition, take up when ripe, dry them before storing, and they will be dry and mealy.

Mr. Airey had lived in a district famed for raising potatoes, and found that the great essential to raise a good crop was LABOR. He had heard it said a fool might raise potatoes, but a lazy man never could.

Mr. Allen said, that in his former neighborhood they did not succeed well in raising potatoes, except the eccentric old man he once before referred to. His neighbors all thought it was because of his knowing a certain phase of the moon that was favorable; but he was now clearly of the opinion that it was in the man's character; for he never undertook to do more than he could do well, and this gave him good crops of all kinds.

Mr. Airey said, in raising potatoes work deeply, drop eight inches apart in the row, and the rows three to three and a half feet apart. Just before the potatoes are up, harrow them over, and if the teeth are too sharp, turn the harrow on its back. Whenever the rows are distinctly seen, run the plow or cultivator between the rows, plow the earth from them, let it rest a week or ten days, plow it back; and the third time before blossoming, run the plough three times in every row as in corn.

The President likes Mr. Airey's idea of using the harrow. I find a majority of the members prefer planting deeply. To cultivate thoroughly has been the universal idea. I would suggest the use of the sub-soil plow to open the ground at least fourteen inches deep (majority in favor of late planting) and not disturbing the soil after blossoming. Some for drills, some for hills, some level culture. The regular use of the light plow or cultivator had been urged. Begin as soon as the weeds appear and keep them down with the harrow. There is quite a difference of opinion as to whether the whole seed, or cuts or eyes be used. Some, again, recommend the seed end; and some reject both the stem and the seed end, and use only the middle. I planted the middle of the potato only, cut lengthwise into four pieces, and from 300 bushels had only about five bushels of small potatoes. And, while Galena Neshannocks sold for 70 to 80 cents, I sold them on "Change at \$1 per bushel. These were planted from the 15th to end of June, so as to mature in the cool nights of September. The latest planted were best. I find the seed end produces the largest number in the hill, but the smallest potato.

The Executive Committee proposed as the subject of discussion at the next meeting, "What Fruits can be made most Profitable for extensive Market Culture in this Locality." Adopted.

The President then announced the next meeting be held at the house of T. R. Allen, Allenton, on the first Thursday of May, at 10 A. M.

On motion, the meeting adjourned.

WILLIAM MUIR, Secretary.

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The borer, in some sections of the country, is committing sad havoc with the apple orchards and nurseries. Dr. Fitch, of New York; stated in one of his recent lectures at New Haven, that the cure or remedy is found in a liberal application of soap to the body of the tree. Dr. F. uses common soft soap, and applies it liberally in the axils of the lower limbs, and on the trunk. He applies the soap about the first of June, and after rains for a few weeks. It is well to apply it liberally where the large limbs start out, as light rains wash it down the trunks of the trees. If the above is a protection against the ravages of the borer, it is an important discovery, and should be universally practised by the owners of apple trees. It probably will not destroy the worms when once beneath the bark of a tree, but the remedy consists in making the tree so offensive to the "winged parent" of the borer, that it will not make use of the soaped tree as a place of deposit for its eggs. But aside from its use as a preventive against the borer, the soap will be a profitable application to the tree. Perhaps whale-oil soap may be equally good; if so, in many places it can be more readily obtained than soft soap.—  
[Boston Cultivator.]

[Written for the Valley Farmer.]

## AN ESSAY ON THE CULTURE OF THE GRAPE IN MISSOURI.

BY GEORGE HUSMANN.

(Concluded from our last.)

### III. Varieties not Fruited Here, but Recommended by Good Authorities, and which ought to be Tried in our Climate.

**DELAWARE.** All good authorities concur in pronouncing this the best grape in America. Free from blight and mildew, never prematurely losing its leaves, and seeming to luxuriate in our climate. Bunches small, very compact, and generally shouldered; berries, small, round; skin thin, of a beautiful light red or flesh color, translucent; without hardness or acidity in its pulp; very sweet, but sprightly; vinous and aromatic. Ripens three weeks before Catawba.

—[Charles Downing.]

**DIANA.** A seedling of the Catawba, which it resembles, but much surpasses in quality: ripens two weeks earlier. Bunch medium; berries medium; reddish lilac, covered with bloom, marked with star-like specks; very juicy, rich and aromatic, without offensive muskiness, and keeps a long time.

**REBECCA.** Bunches cylindrical, about four inches long, very compact, often shouldered; berries full medium, oval; color light green in the shade, golden in the sun, covered with bloom, translucent; flesh of some consistency, juicy, sweet and delicious, with a perceptible native perfume, but not disagreeable; ripens eight or ten days before Isabella, and is not subject to mildew.

**CLARA.** A white grape of the best quality; bunches long; berries medium, round, green, faintly tinged with salmon when exposed to the sun; flesh tender, juicy; flavor rich, sweet and delicious; quality best.

**HARTFORD PROLIFIC.** Hardy, vigorous and productive; bunch large, compact; berries large, globular, somewhat foxy, black, covered with a bloom; flesh sweet, moderately juicy; ripens about ten days before Isabella.

**CLINTON.** Vigorous, hardy and productive; bunch medium, shouldered, long and narrow, but compact; berry round, below medium, black, covered with a thin bloom; juicy, pulpy, brisk vinous flavor, eatable eight or ten days before Isabella, but continues austere till after cold weather, when it becomes very good. Will probably prove valuable for wine.

**ANNA.** Bunches large and loose; berries large, globular, white, changing to amber; translucent, with a white bloom; sweet, rich, vinous and high flavored with a delightful aroma; a good grower, and free from mildew and rot; ripens ten days before Catawba.

**UNION VILLAGE.** The fruit is as large as the Black Hamburg, which it resembles; very hardy and monstrous grower; bunches very large; sweet and rich; a fine table grape; ripens with the Isabella.

**CASSADY.** Bunch medium, compact, shouldered; berry round, medium, greenish white, with a faint salmon tint, thickly covered with white bloom; flesh juicy, with but little pulp; flavor pleasant, very good.

**EMILY.** Nearly white, very rich and of delicious flavor, the bunches and berries resemble in size the Catawba; entirely free from pulp, a first rate table grape, and two weeks earlier than the Isabella.

**BRINDLE.** A black grape of very rich flavor, bunches resembling Black Hamburg, but not so compact; ripens from two to three weeks earlier than Isabella, and is a first-rate table grape. A free bearer.

**GRAHAM.** Bunch of medium size, shouldered, not compact; berry half an inch in diameter, round, purple, thickly covered with bloom, not pulpy, and abounds in saccharine juice of most agreeable flavor; quality best.

**PERKINS.** A fine grape, almost white, berries resembling Isabella in shape and size, sweet luscious and vigorous; ripe three weeks before Isabella; hardy and productive.

**RAABE.** A purple grape, very sweet, and is highly esteemed for wine; bears freely, and ripens three

weeks before Isabella. Bunches and berries of medium size, quality best.

**DEVEREUX.** Bunches of medium size, compact; berries rather small, purple, very juicy and sweet; good table grape and makes a good wine; not liable to rot. Latter part of July.

**GARRIGUES.** A vigorous grower, hardy and productive; very much resembles Isabella, and no doubt a seedling of it. Bunch large, loose shouldered; berries large, oval, dark purple, covered with a thick bloom; juicy, sweet and rich. Ripe ten days before Isabella.

**MARION.** Vines healthy, wood firm, short jointed, good bearer. Bunches large, regular, seldom shouldered; berries medium, inclining to oval, dark purplish black, with blue bloom; juice abundant, pulp thin, promising to be one of the most valuable.

**TO KALON.** Perfectly hardy, and ripens a little earlier than Isabella; bunches large, shouldered; berries oval, large, very dark in color, very sweet, buttery and luscious; an abundant bearer.

The above descriptions are mostly copied from Downing, Elliot, and Dr. Grant, and comprise the most desirable of the new kinds.

### IV. Varieties which may Prove Valuable, but are not fully Tested at the East.

CANADIAN CHIEF, CANNY'S AUGUST, CHILD'S SUPERB, HYDE'S ELIZA, LOUISA, LOGAN, MASSACHUSETTS WHITE, GOLDEN CLINTON, NORTHERN MUSCADINE, GARBER'S ALBINOSS, AUGUST CORAL, CAMACK, LOUISIANA, NORTH CAROLINA SEEDLING, MINOR'S SEEDLING, EARLY ISABELLA, OZARK SEEDLING, ILLINOIS, HUSMANN'S PROLIFIC, RED RIVER, ARKANSAS, TEXAS, POST OAK. I have them all under trial and hope to fruit them next season.

### V. Varieties Represented by Better Sorts.

BLAND'S MADEIRA, MARNOCH CATAWBA, NORTH CAROLINA, HALIFAX, WINE HOME, LITTLE OZARK.

It is truly gratifying to the lover of this noble fruit, to see the warm interest in its culture and improvement, which manifests itself throughout the country. New varieties spring up every day, and we can already count them by the hundred. That among them there are many, which, on further trial, will prove worthless, there can be no doubt, but there have also been found among them some whose excellence is already established beyond a doubt. Great changes are also effected in some varieties by change of soil, climate, etc. of which we have an instance in the Concord, which is much better here than at the East, and for which I confidently predict a great future. It is a pleasing and highly interesting task for the amateur to raise new varieties from seed, by hybridizing. By taking the young wood from seedlings that promise well and look healthy, and grafting it on strong vines, fruit can be had of them the third year after so doing, instead of waiting four or five years. Let us, then, all put our shoulder to the wheel, and we will yet find varieties which will combine all the qualities we want. We have a wide field, with all natural advantages before us, and an immense territory suitable to grape culture. Ours be the glorious task to cover it with smiling vineyards; and we will do more towards promoting the cause of temperance, by giving to the people a healthy and strengthening drink, than all the Maine Liquor Laws will be able to accomplish. If every man in our State cannot rest under his fig tree, he can at least rest in the shade of his vines. There is hardly a house so crowded in but there will be room on its side or over its porch for the graceful festoons of the vines, to refresh old and young by its luscious fruit. Let us, then, plant and cherish them, as one of the choicest gifts of our Heavenly Father, accessible to all his children, be they rich or poor.

### MAKING WINE.

#### The Wine Press.

It is made somewhat like a screw cider press. An iron screw, three or four inches in diameter, is used, either in a strong, upright frame, or coming up through the centre of the platform. A strong, tight



box platform, six or seven feet square, is made of strong plank, two or three inches thick, and six or eight inches at the sides, wedged between heavy timbers. It ought to slope about two inches to the front, which is left open, and a small spout or gutter nailed under it, to receive the juice, and lead it into a tub. Boards to lay over the mashed grapes, and pieces of oak scantlings to lay across to receive the pressure, complete the arrangement. The power is applied by a strong lever applied to the nut of the screw.

#### Gathering and Pressing the Grapes.

The grapes should remain on the vines until very ripe. Pick off all decayed, dry, or unripe berries from the bunches in gathering. Such berries are not fully ripe, may be put into a separate vessel, to make an inferior wine. They may then be bruised in a tub, with a wooden pestle, or run through a mill made for that purpose. I have used Hicock's Cider Mill to advantage, by taking off the upper zinc cylinder. They are then emptied into a large receiving or fermenting tub, with a spile on one side to draw off the must.— This is covered with a cloth, and the mashed grapes left to undergo a slight fermentation. I generally let them ferment twenty-four hours and then draw off the must, and press. Some press them immediately; others leave them to ferment three or four days.— When pressed immediately they will make a light colored, mild, agreeable wine, which will soon be saleable. If fermented longer, they will make a wine of a darker color, more aroma and more stringency, but which will keep better and improve with age. In the whole process of wine making the utmost cleanliness should be observed.

After fermenting, the grapes are emptied into the press, and pressed several times, until all the juice is extracted. The must is then filled into clean, sweet casks, in a cool cellar. Should the casks be new, soak them for eight or ten days with clear water. They are then scalded with hot water, and when dry fumigated with sulphur. Fill the cask to within three inches of the bung-hole, and lay a vine-leaf, with a small sack filled with sand, on the bung-hole. They should then remain until fermentation is over, when they can be filled with must, kept separate for that purpose, and bunged tight.

In February or March, the wine will be clear. It should then be racked into clean casks, and bunged tight. A slight fermentation will ensue in May, after which it should be racked again, and may then be kept in casks or bottles, as most convenient.

#### Another Method to Make a Superior Wine.

Leave the grapes on the vines until very ripe, then gather carefully, and spread the grapes in a dry loft, where there is plenty of air, on layers of clean straw. Let them remain for about two weeks; then draw them through a rasp made for that purpose, to separate the berries from the stems, or they may be stripped off by hand, mashed and then pressed. This will make a very strong, yet mild wine, which will not have the stringency so many object to in our native wines, as this is mostly in the stems of the grapes; but it is very troublesome, and will never be extensively practiced.

#### Keeping the Grapes for Winter Use.

In a dry day gather the grapes, choosing the best bunches, and carefully cut out, with a pair of scissors, all decayed or rotten berries, taking care not to bruise them, and lay them in a shallow basket. Seal the stems with sealing wax, to keep them from shriveling, and lay them in a dry, airy garret, on clean, sweet straw, spread for that purpose. They must be spread thin, so they do not touch each other. In this way they will keep for several months. If you wish to keep them still longer, pack them, after a few days, into shallow boxes, between layers of cotton batting, and place them in a cool room. They may be kept thus for three or four months.

#### Statistics.

The cost of establishing a vineyard naturally depends much upon the quality of the soil, cost of labor, variety of vines, etc. The following is about the cost

of a Catawba vineyard per acre, in common soil, without stones; distance, 6 by 6, or 4 by 8 feet, with spaces allowed for surface drains, paths, etc.:

Cost of 1100 yearling plants,	- - -	\$25 00
" trenching,	- - -	75 00
" planting,	- - -	25 00
" 1100 small stakes,	- - -	5 00
" attention during first summer,	- - -	25 00
" 1150 cedar posts, at 8 cents.	- - -	92 00
" 3300 laths, nails, etc.	- - -	20 00
" labor, second year,	- - -	50 00
" labor, third year,	- - -	83 00

\$400 00

Of course several of these items can be furnished considerably cheaper where timber is convenient.

The following has been the produce of a vineyard of Catawba, now under my care, since 1849:

Bearing season.	Vines in bearing.	Gallons of wine made.	Price.	Yield per acre.
1849, 1st, 1500		750	\$1 25	\$600
1850, 2d, 2000		150	1 25	95
1851, 3d, 2000		500	1 25	300
1852, 4th, 1800		210	1 25	120
1853, 5th, 1500		580	1 25	500
1854, 6th, 2500		750	1 75	600
1855, 7th, 3000		230	2 00	150
1856, 8th, 4000		150	2 00	75
1857, 9th, 4000		2000	1 20	600
1858, 10th, 4000		210	1 20	60
1859, 11th, 1200 probably	1200 probably	1200	1 20	455

Which will show the average yield to have been about 323

Deduct from this cost of yearly labor, \$50  
Interest on \$400 at 10 per cent. 40

90

Will leave a clear profit of - - - \$233

Year after planting.	Acres in vines.	Yield of vineyard.	Price of wine sold.
1847, 2d year,	5-6	24 gal.	\$2 00
1848, 3d,	5-6	1000	2 00
1849, 4th,	2	600	1 50
1850, 5th,	2	350	1 25
1851, 6th,	2½	450	1 75
1852, 7th,	2½	500	1 50
1853, 8th,	2½	350	2 00
1854, 9th,	3½	800	2 00
1855, 10th,	3½	50	1 50
1856, 11th,	3½	1000	2 25
1857, 12th,	6	4500	1 50
1858, 13th,	6	1100	1 75

It must be taken into consideration, however, that at the time these vineyards were planted, it was an entirely new branch of industry with us, and of course numerous errors and mistakes in the treatment of the vines were made. We had also the extremely cold winter of 1855-6, which destroyed almost the whole crop, killing the young wood.

#### Cost of an Acre of Norton's Virginia.

1000 layers, at \$25 per 100,	- - -	\$250 00
Trenching,	- - -	75 00
Planting,	- - -	25 00
1000 small stakes, 18 inches,	- - -	4 00
1050 cedar posts, 8 cts.	- - -	84 00
3000 laths, nails, etc.	- - -	18 00
Labor, second year,	- - -	50 00

\$506 00

The third year the vineyard would probably bear enough to pay cost of attendance, expenses, etc.

Average yield per acre the fourth year, and all following:

400 gallons per year, at \$1 50 per gallon,	\$600 00
Deduct from the cost of yearly labor,	\$50 00
Interest from capital,	50 60

\$100 60

This will leave a clear profit of \$499 40

Yield of an acre of Concord vines for market purposes—  
 1000 vines at least 10 lbs. per vine (probably  
 15 lbs.) - - - - - 10,000 lbs.  
 Lowest market price, at 10 cts. per lb. \$1000 00

But as the Concord is two weeks earlier than the Catawba, much of the crop can be sold at much higher prices, as it is also a much finer bunch and berry.

The whole number of acres planted in and around Hermann, may be estimated at about 250 acres. But people are planting more every year, and I boldly assert that in a few years the acres devoted to wine culture in our State, will be counted by thousands instead of hundreds. And here let me add, that it has been a great drawback to the advancement of grape culture here, that our people are too much disposed to look to Ohio, and the doings of Ohio wine growers, for examples. We have a different climate here, a different soil, and therefore our treatment must be different, and other varieties may be cultivated here. Let us eke out our own path, like energetic, thinking men. Let us try other varieties—not only those recommended by our Ohio brethren—let us faithfully try all, and keep only such as are worthy of general culture. The flat of Mr. Longworth against Norton's Virginia has done more to retard the progress in the culture of that invaluable grape than all other obstacles it met with, and why? Because we preferred seeing with other eyes to using our own; and they were not fairly opened until Ohio wine growers sent here to procure plants of the very grape Mr. Longworth had condemned.

But the most serious obstacles are overcome. We have labored faithfully and hard. We have learned something, and are learning more every day. A glorious future is before us; let us labor with head, heart and hand, and we may be sure of a rich reward. Let us be willing to listen to the advice of others; but let us also always hold this principle in view, that experience is the mother of wisdom.

## The Apiary.

[Written for the Valley Farmer.]

### HINTS FOR THE MONTH.

BY J. W. QUIMBY.

When in the vicinity of orchards bees collect large quantities of honey from the blossoms of fruit trees, the belief of many that, in doing this, they seriously injure the future crop, is, in some cases, a serious detriment to bee culture. Let us reason about this matter for a moment. If it can be shown that this insect is not only harmless, but even beneficial in the case of some plants, from which she obtains honey, something will be done towards proving, by analogy, that she does no injury to the fruit crop. Take the buckwheat for example. This crop has been cultivated in the vicinity of large apiaries for many years, to my own knowledge; and, while in no case could any injurious influence be attributed to the honey bee, the fields that were nearest sometimes bore the best crops. This kind of proof is, perhaps, the best we can get; but there are a few other considerations to be borne in mind.

Any person who has passed near a field of buckwheat in full bloom, must have detected a strong and peculiar odor proceeding from it. This precisely corresponds with that which pervades the apiary during the season of gathering honey from this plant. Now, the inference is that the odor is nothing more than particles of honey floating in the air; and that, if untouched by the bee while in the cup of the flower, the substance is wasted by evaporation, and fails to meet its adaptation in the plan of nature. Again, the bee has no

puncturing lancet, like that of the mosquito, with which to pierce the tissues of a blossom and injure or destroy them; but, in its stead, a brush-like tongue with which she laps or licks up the honey from the cup in which it is deposited. I conclude, also, that the bee is no detriment to any kind of grain or fruit crop, from the well known fact that many species of plants are actually dependent on some such agency for the development of their fruit. Were it not for bees, and insects of similar habit, cucumbers, squashes, &c. would doubtless utterly fail in every case from the want of some means to convey the fertilizing matter from the staminate to the pistillate flowers. If the bee is thus indispensable in one department of the vegetable kingdom, I am not only unwilling to believe that she is any serious injury to any other; but strongly inclined to think that every blossom she visits is materially benefited in the increased agitation of its parts, and the consequent more thorough mingling of its fructifying elements thus affected.

In regard to putting on boxes for surplus honey, it is always best to do it in good season. They will not, as has been said, prevent the bees from swarming; and they may possibly work in them very early in the season. In rare cases, honey has been deposited in boxes as early as the time of fruit blossoms; but generally, not before the month of June, after the appearance of the white clover bloom. As recommended in a former article, put in pieces of combs as guides and inducements to begin work early. These should be white and tender so as not to make a hard and bad looking spot in the finished card of honey. The passages from the main hive to the boxes should consist of at least two inch holes to a box six inches square, bored according to a pattern which all the boxes will fit.

Watching for swarms must commence as soon as the cells for young queens are finished in any of the hives; but to those who do not feel competent to make the requisite examinations, it may be given, as a general rule, to commence about the middle or the last of May, earlier or later as the season is advanced or otherwise; or as soon as the hives are full of bees, and the yield of honey is continuous and abundant. Bees, doubtless, swarm earlier in many of the Western States than here in New York. The completed queen's cell is the most reliable indication of a first swarm known. To discover this in the box hive invert it carefully, drive the bees down among the combs by blowing the smoke of tobacco or rotten wood among them, press the combs apart, and examine their lower edges and sides. Usually, if the bees are preparing to swarm, you will see, somewhere near the bottom, one or more queen's cells, pointing directly upward as you have the hive inverted, tapering from three quarters of an inch in diameter to one; and, when sealed, about an inch in length. Generally, from three to twenty are begun; and the close observer may watch them through every stage of their progress, from their foundation to the deposition of the royal germs, their transformation into rapidly growing larvæ and the final completion of the cells. Hives with movable frames, afford great facilities for making these examinations.

The hatching of the egg is effected solely by the natural heat of the bees in the hive, usually in three days, when the heat is from 70 to 80 degrees Fahrenheit. Miner, in his "American Bee Keeper's Manual," says the time may be prolonged, even to a perfect suspension of vitality for a long period; and then on being subjected to the usual heat, the development takes place in the natural way.



[Written for the Valley Farmer.]

### CHINESE GEESE.

BY C. N. B.

Of Chinese Geese there appears to be several varieties—the Hong Kong, by some of the old writers called the African, Guinea, Spanish, Siberian, Muscovy, Russian, Knob and Swan goose, the Red-legged Brown, the Black-legged Brown and the White Chinese goose.

Of all the goose tribe, for beauty and ornament, we place the White Chinese at the head. The figure above is a tolerable fair representation. It is far more beautiful and far superior in every respect to its brown relatives. It is a splendid bird either in or out of the water—its neck being long, slender and gracefully arched while swimming. No bird, not even the swan, sits lighter or more gracefully on the water. The White Chinese goose is of a pure white, with a bright orange colored bill, and a large knob of the same color at its base. Its legs and feet also of an orange red. Its pure white color, contrasted with its orange-colored bill and legs, gives quite a pleasing effect, and it certainly merits a place in the first class of ornamental poultry. They are larger, less erect than the Brown Chinese, and apparently more terrestrial in their habits; the knob at the base of the bill is not only larger in proportion but of a different shape.

The Chinese Geese are prolific layers, and their eggs are small for the size of the bird, but what they lack in size they make up in numbers. One of these Chinese geese, now in our possession, laid the past year over one hundred eggs, and hatched out thirteen goslings and brought them all up. The greatest fault with them for this northern climate is, they commence laying too early in the season; the eggs are apt to get chilled rendering them infertile. The spring goslings are easily reared, and a fair average quality for the table. There is considerable difference in size between the sexes, frequently amounting to one-third of their relative weights.

Their movements on the water are more graceful and swan-like than the goose. A quiet lake or pond is more to their taste, and more conducive to the fecundity of the eggs than a swift running stream. It is delightful to see a flock of them on a fine day in spring lashing the water, diving, skipping, rolling over through mere sport, and playing all sorts of carleques.

In point of longevity they are said to be far from equaling the common domestic goose. Economically considered, they must, we think, yield precedence to the larger and better shaped, and better flavored Bremen.

Of its habits in a wild state we know nothing; yet that it is domesticated with the utmost facility we have abundant proof, for it has been long reared in ponds and on the fresh-water sheets of pleasure grounds, as an ornament.

## Domestic Department.

### CHOPPED LIVER.

The heart, tongue, under jaw and liver of a calf or lamb, or even the liver alone, makes a fine dish. Boil till tender, chop fine; season with butter, pepper, salt and vinegar. It is not a very healthy dish however.

If a cow's udder becomes inflamed, the "cake" may frequently be removed by an application of Indian meal and cold water, using considerable friction with the hand.

I have seen calves relieved of lice by applying lard and tar to the gathering places of the tormentors; and tying a rope, saturated with the same, about their necks.

### SCALD HEAD.

This terrible disease, if taken in its first stages, may be cured by shaving off the hair, covering the affected part with a plaster of tar. If the sore does not seem cleansed when this comes off, apply another; and so on till a great change is apparent. Then oil it well, wash it thoroughly in soft water and castile soap, and anoint it every day with tobacco ointment; for a recipe of which, see March number of the "Valley Farmer."

### STARCH.

Allow a teaspoonfull of good Poland starch for every shirt; and for other things proportionately. Make it into a smooth paste with cold water; pour boiling water over it, stirring it briskly all the while till it is well scalded. Set it over the fire, stir it till it boils, skim it if necessary; add a teaspoonfull of fine salt, and a bit of refined tallow as large as a big pea to every pint of starch. Use, when hot, and let the clothes lie at least twelve hours after folding, before ironing. It is a matter of convenience to do your starching on washing day, letting the starched clothes dry with the rest, when they may be sprinkled and folded for ironing.

### SORE THROAT.

Bind a wet compress upon it on retiring to rest; or, if you prefer the old custom of wearing your stocking for a night necklace, don't let any body laugh you out of it. I have cured my throat that way many a time.

### POISONS.

It is said that a table-spoonfull of mustard, administered immediately, in cases of accidentally swallowing poison, is an excellent antidote.

### TOOTHACHE IN A HOLLOW TOOTH.

There are many remedies; but the surest way is to have the cavity filled at once if it is not too large. If the tooth is past redemption, have it extracted immediately.

### BEAN BROTH OR PORRIDGE.

A very fine dish of soup is produced by boiling a coffee-cup full of beans (after soaking and draining), in a gallon of water, with half a pound of fresh beef tolerably fat. Season with salt and pepper, and add a pint of pounded crackers. It is excellent when hot, but I cannot vouch for it "cold," or its superiority when "nine days old."

### FRIED MUSH.

Having made your calculations as to the quantity of meal you wish to make into mush, stir half of it into cold water sufficient to reduce it to a batter, and add it to the boiling water (which, I take it for granted, you have over the fire), stirring briskly all the while; then, sift in the dry meal gradually, and stir till the whole is well cooked, (let the salt be boiled in); pour it into a long narrow dish—a cake tin for instance—and set it away to cool.

When thoroughly cold, turn it out, and with a thin, sharp knife, cut it into slices half an inch thick; fry in a spider, griddle or frying pan, plentifully covered with pork fat; turn carefully when well browned, adding more fat; do not hurry the process, as it is better to let it fry slowly over a moderate fire. The slices should not be broken in turning.



[Written for the Valley Farmer.]

### THE FARMER'S WIFE.

BY HETTIE HAYFIELD.

We had a mind to add to our caption, A Self-Sustaining Institution. But in these days when self-indulgent bachelors find it so hard to make belt and buckle meet over their necessary cigars, liquors, &c. we do not care to incur their anathemas by intimating that a wife is an absolutely economical appendage. Though in another arena we will enter the list against any infidel knight who underrates woman's worth in any department of life.

Our position is, that the housewife's department in the farmer's home should be self-sustaining, in a pecuniary point of view; and may be rendered productive if necessary. In other words, that the farmer whose wife is allowed the necessary help for the keeping of garden, dairy and poultry yard, may always reasonably expect to find his table abounding with the products of the same, and have just cause to object to any draw on his purse for deficiencies in said articles.

We do not know that the range of duties generally assigned to American wives is wider than Revelation or nature indicates, but it is certainly extensive and various. And while the farmer's wife, as wife, mother and housekeeper, stands precisely on the same ground as all other women who hold like relations; yet her duties, in a business view, extend much further and require a degree of energy, system and character, not absolutely requisite in the town lady. In any station it is the wife's duty to study the comfort and respectability of her household; to make the most of her house and furniture; and beside cleanliness and care, she may many times by a little skill render tasteful and agreeable what would be otherwise plain and unattractive. It is, too, the duty of every wife in the culinary department to have produced on the table whatever her husband provides, in the most agreeable form, taking economy into consideration as far as necessary, and then remembering the Savior's twice repeated lesson, "Gather up the fragments, that none be lost."

It is seen thus far that the duties of all wives are the same; but there is a privilege or responsibility imposed on the farmer's wife, by which she is made, not the simple stewardess of the provision her husband makes for his family, in city or town life; but in the country the wife

may be an active partner, making that part of the capital entrusted to her proportionately productive with the rest of the farm. And here we must say, even if it be considered a digression, that want of industry is certainly not characteristic of women of our country, so far as my observation extends in any sphere. On the contrary, the self-aiding and self-sustaining women of our knowledge rather out-number the same class of the other sex. But we think there is often want of application of their labor to usefulness. They do not well consider their means or ends, but toil on in blind industry. It would be wise for every wedded pair, ere they begin life, especially in the country, to determine their final location, the kind of home and manner of life they propose as their ultimatum; then let every blow of labor, every dollar of expense, tend to that point. We are sure with women there is often a sad misapplication of labor. To work at all with the hands is sometimes sad management. It is surely poor economy for a woman to chain herself to a loom, wheel or sewing table, while a raw or inexperienced servant destroys or wastes, for want of instruction, more in a week than the housewife's personal labor saves in a month. Surely it is misapplied when housewifery, children or the improvement of her own mind is neglected for a paltry piece of needle work. Not that we wish to decry these pursuits under suitable circumstances: they are available in any house where leisure permits—and in some cases we think righteous charity demands the rich to employ themselves in that way and give out their plain work to the poor.

To revert to our theme, we have laid it down as a truism that the female department of farming should be self-sustaining; the next question is, whether it ought to be or can be rendered remunerative.

Whether it ought to be, is unquestionably the right of the husband to determine. As the proceeds from this department are usually considered the wife's pin-money, some "gude men," jealous of authority, object, that thus it breaks up the proper dependance of the wife on the husband—while the pride of others revolt at the fancied degradation of such petty commerce.—This opinion is arrived at by a course of reasoning we cannot comprehend. If the man who causes two blades of grass to grow where but one before was produced, is considered a benefactor of mankind, is not that woman equally so who achieves the same in the cultivation of strawberries or potatoes. If a man, by a superior economical use of food marvelously increases the weight of his pork, is not the result quite as beneficial to the community if a skilful woman, by the same process, quadruples her dairy produce. And what the possible difference in respectability is between selling the pork or the butter we fail to comprehend.

We take the position, therefore, that all employments, not detrimental to the interests of society, are innocent and lawful; all which contribute to happiness are useful and commendable. Further, we think the obligation to labor bodily or mentally, is an obligation as expressly declared in the moral law as the obligation of rest



on the Sabbath. We must labor for society or the poor, if a favoring Providence has exempted us from the necessity of working simply for selfish purposes. But the number who have no necessity for the small avails of the housewife are comparatively few. To those wives who feel debt a kind of bondage it affords much and noble pleasure to pay any sum, however small, towards the extinction of the debt. It is a pride and pleasure to a true hearted wife, while the husband is paying off for the homestead, or building the barn, or some other necessary improvement, to contrive the means for papering and painting and furnishing the rooms that else must remain unfinished and unfurnished until his hard toil reaches them in its course. The means of self-aid which women usually possess are the labor she controls, and the marketable products of this labor. Generally the garden, dairy and poultry yard are her capital, and sometimes the orchard and wool crop. Let the housewife duly consider before she embarks in any enterprise and count all the costs; if her plan promises a fair return let her pursue it with system, energy and perseverance. Her gains must of course depend much upon her convenience to a good market. Yet if there is a town or point on the river or railroad she can reach at all, she may occasionally turn her savings into money. Of course in this case she will have to possess great skill and carefulness, for second-rate butter, cheese, &c. never prove at all saleable after keeping. But we will particularize a little, as we consider ourselves bound to be always practical, if not entertaining or even instructive.

#### GARDEN MARKETING.

If you reside near a city you may find this branch of business extremely profitable. If near a small town you will find it not remunerative enough probably to justify a daily or even weekly market trip. In this case raise only a home supply of quick perishing vegetables and put your ground in good staples that will be sure to be needed for winter sale—potatoes, onions, cabbage, beans, salsify, &c: but here we repeat one caution—count the cost, and if the same ground and labor will bring as much in wheat or corn do not worry yourself to death for the glory of it. Fruits, nearly everywhere, find some market and need in no case be lost, as they may in the shape of cider, potted fruits, sauce or dried, be rendered available.

#### THE DAIRY

Is usually the most reliable and productive source of gain to the country wife. Where practicable it is always most profitable to sell milk. Cheese is next best, for if it bears no better price than butter the same quantity of milk makes more cheese than butter. If your market is distant, however, butter is the surest market; but either should be the result of the nicest skill that is attainable by patient practice.

#### POULTRY.

Spring chickens bear a good price always, but if eggs pay better, even in winter, you may save all up for winter sale. Fatten your turkeys and ducks at home and sell in winter. If you are a

habitual reader of the papers, as I hope you are, you will see that in winter you may Express a ton of poultry to New York and find it profitable.

#### WOOL.

Ascertain the price of wool in the grease, and clean wool. Weigh, wash and pick ten pounds. Weigh again, and sell it clean if you will be fairly paid for your labor. Count, further, the cost of coloring, carding, spinning, weaving, warping and value of wool in each yard of cloth. If you find this additional labor on your wool will pay, manufacture it. But unless you have supernumerary women about, count close; it is dirty and disagreeable to work. (These hints are generally most applicable to slave latitudes). But if you have supernumeraries, remember, if their labor only maintains them, a penny saved is a penny gained. The same considerations will decide about knitting; coarse jeans and gentlemen's socks always bring a good price; and we have seen, in many wealthy houses, articles of luxury purchased with them. We knew a proud step-mother, who could not prevail on her lord to be as liberal as she wished him to his own daughter when she married, give a superior outfit in bedding, table-linen, &c. the price paid was *several hundred yards of linsey!* Perhaps some examples, which we regret to make nameless, will show the practicability and value of this branch of farm life. There is in the bounds of our commonwealth, the wife of one of the most distinguished men of the day. The fragrance of her domestic virtues must always hang around his name. A strong sense of maternal duty, prevented her the solace of his companionship or participation in the pleasures flowing from his position, by accompanying him to the seat of his duties. She devoted herself to home cares, amongst them were the garden and dairy. Her market cart was early and never missing; her milk cans the brightest; her fruits and flowers perfection. The amount of her gains we do not know. A hotel keeper told me he paid her for milk for many years, \$1,000 per annum. Her charities are extensive and unostentatious; and we have heard that her husband never manifested deeper emotion than when he called about a bank debt of several thousands, and found she had cancelled it from her own resources. In the same vicinity, there resided a good wife to whom fame gave wonderful store rooms. We know from reliable authority, that she manufactured, beside all home-wear, cloth by thousands of yards; and we were told by a merchant, that he had sold to one house in Vicksburg, 600 pair of socks, at \$1.25 per pair, that she had manufactured in one season. I remember well a pioneer in this business, who paid \$1500 for the second carriage we ever saw in this State. Close beside us is one who came from town ten years ago to a place bare of all conveniences. She has made many comforts through her market resources; bought a first-class servant, a town lot, a rock-away; and has a *stocking full of money on hand.* We know another who has no capability of hoarding, but invests in home improvements. She commenced with one cow, used the proceeds

to buy three more; then proceeded to build the creatures a comfortable home from their own resources. She dedicated the proceeds of her poultry to the establishment of a snug poultry yard. The fruits of the garden were first used to inclose the garden itself. It would be hard to find a mechanic in the village who had not worked for her pay—farm produce; and, by the way, between two reliable people, this is a good bargain. A young man may bind himself to do a certain piece of work by the close of the year. So he can work on it when he has no other job, she sends him whatever of surplus produce he desires, as she has it to spare—vegetables, fruit, milk, meat, eggs, &c. &c. When settling time comes, neither can say they have felt the expense.

The two first examples referred to, lived near a large city, and used a large capital. The others have but the ordinary resources of farmers' wives generally. The hue-and-cry from press and pulpit for reform and retrenchment in private life, have turned us aside from our usual track to a subject that we hope may be suggestive of relief to some. Sisters of the Valley, in times of storm the seaman always takes in his sails—take in yours. If the storm has not reached your own homestead, deny yourselves for example sake—your neighbors are so imitative. If the knife is needed in your own grounds, prune freely. Look over your household and wardrobe—repair, burnish up and lay by—nor buy nothing for fashion's sake. Look through your housewife department, and see how abundantly and well you may live on your own farm produce, and a few, very few, exchanges at the grocery. But be sure, if retrenchment is necessary, that you retrench in the right quarter. Do not conclude your Maker waives his claims for hard times. Do not think the poor are less needy than usual. Be noble. You committed the sin of extravagance, if there was one committed, and enjoyed the fruits—let the punishment fall on the criminal. Have self-respect enough, if honesty requires a severe change, to make it without a glance of fear at public opinion.

### HABITS.

There is not a soul of us that has not some bad habits that ought to be buried with the old past and never see a resurrection. We have habits of speech that often outrage propriety, and sometimes decency. We have habits of manner, disagreeable or vulgar, and therefore offensive to correct taste. We have habits of thought, always injurious to ourselves, and which often directly injure our friends. We have habits of feeling, that really mar our hearts and lives. We have habits of appetite, that do not a little to undermine our health and degrade our characters, as well as make our presence offensive to those who love and honor us. We have personal habits of careless indifference to many of the proprieties of Christian life, that are real

hindrances to our success and happiness. I propose that each one of us shall, by a careful self-examination, search out and exterminate every evil habit before its chain is more tightly riveted. I propose that each one of our readers shall consider wherein he can take one upward step, and take it. It is not well to let the months and years repeat themselves, while we repeat over and over our bad habits, till they get ingrained into our very characters. We should trample them under our feet, cost what it may. Habits are not omnipotent, they are not irresistible. There is nothing more intimately connected with our well being and happiness than our habits. They strike their roots into our characters, and mold us into their likeness. If they are evil habits, there is no telling how much they injure and degrade us. Men, women and children, let us see to it that we make havoc of our evil habits. If we do not they will make havoc of us. \*

### POLITENESS AT HOME.

Mr. Webster defines politeness as follows: "Polish or elegance of manners, gentility, good breeding, ease and gracefulness of manners, united with a desire to please others, and a careful attention to their wants and wishes."

Many people regard politeness as something affected, put on for show, a sham pretension. But this is not the case. There are simpering pretenders enough. There are a plenty of silly bowers and scrapers; not a few who put on mock airs. But these are not polite people. They are very impolite. They are sheer pretenders. To possess agreeable manners, kindly feelings, tender sympathies, and a generous good will, and always exhibit these traits of character to others, is to be polite. Politeness is really a quality of the heart, though it exhibits itself in the outward conduct and manner.

This quality of character is of all places most appropriate at home. To see a husband and wife always truly polite to each other, always courteous, respectful, attentive to each other's wishes, while the children and servants catch the example and respect each other's feelings, and are careful to speak and act so as to please and not offend—is to see what is most worth seeing of almost everything on earth. Politeness costs but little. It is easily obtained. It makes friends, keeps peace, prevents misunderstandings, increases happiness, refines character, intensifies affection, and does many good things and no bad ones. It only takes an effort to be polite. If one receives a favor it is easy to say "I thank you." If one is addressed, it is easy to make respectful reply. If one is asked a favor, it is easy to grant it pleasantly, or withhold it kindly and courteously. It is easy to speak agreeably and act generously. And this is to be polite. If one is polite at home he will be abroad. If one is impolite at home he will scarcely fail to be away from home. The home character we generally carry with us into society. We may change our clothes to go away, but we seldom change our characters. If we are well bred at home we shall be in society. \*

## Editor's Table.

### Premiums for Largest Lists of Subscribers.

The Premiums offered by us for the largest lists of subscribers, sent to the "Valley Farmer" for 1860, have been taken by the following gentlemen:

The first Premium, **MANNY'S COMBINED REAPER AND MOWER**, valued at **ONE HUNDRED AND FIFTY DOLLARS**, is awarded to **E. R. Fulbright**, of **Greene Co. Mo.** he having sent the largest list.

The second Premium, **SINGER'S LETTER A FAMILY SEWING MACHINE**, including hemmer and all complete, valued at **NINETY DOLLARS**, is awarded to **Samuel Whitsett**, of **Johnson Co. Mo.** he having sent second largest list.

The third Premium, **HEDGES' CORN SHELLER**, manufactured by **Kingslands & Ferguson**, of **St. Louis**, valued at **EIGHTY-FIVE DOLLARS**, is awarded to **A. Lightburn**, of **Clay Co. Mo.** he having sent the third largest list.

The fourth Premium, **MOORE'S GRAIN AND SEED DRILL**, manufactured by **L. P. Littlefield**, **St. Louis, Mo.** worth **SIXTY-FIVE DOLLARS**, is awarded to **John Stephens**, of **St. Louis Co. Mo.** he having sent the fourth largest list.

The fifth Premium, **LINDLEY'S CORRUGATED FIELD ROLLER**, **G. Lindley**, 79 Locust Street, **St. Louis, Mo.** Manufacturer, valued at **SIXTY DOLLARS**, is awarded to **Francis M Gwin**, of **New Albany, Ind.** he having sent the fifth largest list.

The sixth Premium, **LINDLEY'S BROADCAST SEED SOWER**, manufactured by **G. Lindley**, 79 Locust street, **St. Louis, Mo.** valued at **SIXTY DOLLARS**, is awarded to **D. S. Fairchild**, of **Monroe Co. Ill.** he having sent the sixth largest list.

The seventh Premium, the **VICTOR HAND MILL**, manufactured by **Riorden & Johnson**, 185 North Main Street, **St. Louis, Mo.** valued at **FIFTY DOLLARS**, is awarded to **Thos. Johnson**, of **Jackson Co. Mo.** he having sent the seventh largest list.

The eighth Premium, **SQUIRE'S SELF-DISCHARGING HORSE RAKE**, valued at **FORTY-FIVE DOLLARS**, is awarded to **William E. Thompson**, of **Saline Co. Mo.** he having sent the eighth largest list.

The ninth Premium, **Clark's Revolving Looper Double Threaded Family Sewing Machine**, valued at **THIRTY-FIVE DOLLARS**, is awarded to **Dr. Richard Thurston**, of **Van Buren, Ark.** he having sent the ninth largest list.

The tenth Premium, **KALLER'S GREAT WESTERN CORN PLANTER**, manufactured by **E. R. Reeves**, of **Perry, Ill.** valued at **THIRTY-FIVE DOLLARS**, is awarded to **E. C. Ticknor**, **Nelson Co. Ky.** he having sent the tenth largest list.

The eleventh Premium, **Fruit and Ornamental Trees**, from the nursery of **Carew Sanders & Co.** of **St. Louis, Mo.** to the value of **Sixteen Dollars**, is awarded to **C. Ball**, of **St. Clair Co. Ill.** he having sent the eleventh largest list.

The twelfth Premium, **SMITH'S PATENT HAY, STRAW AND STALK CUTTER**, valued at **FOURTEEN DOLLARS**, is

awarded to **N. N. Parberry**, of **Pettis Co. Mo.** he having sent the twelfth largest list.

The thirteenth premium, **CANON'S PATENT BROADCAST SEED SOWER**, valued at **TEN DOLLARS**, is awarded to **W. T. Hearne**, of **Bourbon Co. Ky.** he having sent the thirteenth largest list.

**THE EDITION FOR JANUARY EXHAUSTED.**—The increase of subscribers has been so great since the commencement of the new volume that our edition for January is entirely exhausted. We printed double as many extra copies for January, this year, as we did last and yet there are several hundred new subscribers on our books to whom that number has not been sent. As soon as the next edition is out we will mail to those who have not yet received that number. We added several thousand more copies to the edition commencing with the February number, and shall be able to send the volume complete to all new subscribers.

The great increase of subscribers encourages us to hope that at no very distant day our edition will reach fifty thousand. Let all our present readers lend a helping hand in extending our circulation, and we shall soon have the pleasure of writing for fifty thousand readers. Every patron has more or less influence, and with a little effort could send a number of subscribers. We feel profoundly thankful for the kind efforts of our friends in extending the circulation of our journal the past season.

**TRIAL OF DRAIN PLOWS.**—The account of the trial of **Hammond's Mole Plow**, announced in the April number of the "Valley Farmer," to take place near **St. Louis**, is necessarily deferred, and will appear in our issue for June.

**ANALYSIS OF SOILS.**—We are occasionally inquired of by farmers where they can have samples of their soil analyzed. We take pleasure in replying that **Dr. Robert Peter**, of **Lexington, Kentucky**, is exclusively engaged in his laboratory in matters of this kind. For skill and accuracy in chemical analysis, **Dr. Peter** has no superior. He has just completed the analysis of several hundred specimens of soils, minerals and waters of **Kentucky**, connected with the **Geological Survey** of that State; and is now engaged in a similar work for the State of **Indiana**.

It would be well for every farmer to know precisely to what crops his land is best adapted; and what substances within his reach might be applied to his soil, calculated to give the most profitable returns. It is the work of the chemist to tell this. Farmers desiring light on these subjects, can address **Dr. Peter** as above.

**INVENTION AND AGRICULTURE.**—In the week ending with **March 27th, 1860**, there were issued at the **United States Patent Office**, sixty-eight original patents. **TWENTY-FOUR** of these—more than one-third of the whole—are for improved machines connected with agriculture.

**THE WINTER WHEAT CROP.**—We have very bad accounts of the present wheat crop. The following letter from an observing farmer of southern Illinois is but a fair sample of scores of similar letters we have received:

EAGLE CLIFFS, Ill. March 12th, 1860.

The general complaint with us is the gloomy prospect of the wheat crop. It is so badly killed through this section that it is very doubtful whether the fifth part of an ordinary crop will be realized. The weather has been very favorable for the past ten days to bring out whatever of vegetation of the crop there may be, but the life is not there. There are parts of fields in certain shielded localities, and some fields in the small or narrow valleys along some of the streams that have a promising appearance. There will be considerable spring wheat sown, but with strong misgivings as to the result, inasmuch as rust mostly takes the wheat here about the first of July. Yet we will sow in hope.

D. M. LIVES.

**WESTERN NEW YORK AGRICULTURAL AND MECHANICAL ASSOCIATION.**—A Stock Company, under the above title, has been proposed in Western New York, with a capital of \$50,000, in shares of \$10 each. It is proposed to purchase a tract of ground near the city of Rochester, to contain from 40 to 100 acres, to erect permanent buildings for the exhibition and sale of agricultural and mechanical products thereon. The movers in this enterprise disclaim any intention of rivalry or interference with the State Agricultural Society. An application has been made to the Legislature for a charter.

**EDS. VALLEY FARMER:**—By order of the Board of Directors, please announce through your paper, that the next annual exhibition of the Pettis County Agricultural and Mechanical Association, will commence on the 11th day of September, 1860, and continue four days.

Respectfully,

ANTHONY HAYNES, Secretary.

GEORGETOWN, Mo. March 31st, 1860.

**Officers of the Callaway County Agricultural and Mechanical Society:**

Chas. A. Bailey, President.

John Sampson, Joseph Flood, Jacob Maddox, Harvey S. Hubbard, Marshal Gibson, Benj. Biggby, Henry F. Renoe, Will. Carington, Directors.

George F. Burdett, Secretary.

Col. J. F. Jones, Marshal.

William King, Asst. Marshal.

Zedec Hook, Treasurer.

**TO CORRESPONDENTS.**—We are receiving numerous letters of inquiry on various subjects connected with the operations of the farm. These will all be answered in their proper seasons, in the "Valley Farmer." Some of them, however, are received too late for timely answers in the present number. The one on "Corn Planting," for instance. The request, however, so far as it relates to the culture of this crop, may be answered by an article prepared previous to the receipt of our correspondent's note.

The article desired on orchard planting, varieties of fruit, &c. by "J. H. G." would be entirely out of season in our May number. The subject shall receive attention in time for the next planting season.

**BERKSHIRE PIGS.**—We have had a number of inquiries for pigs of this breed. Mr. Conrad Bornman, who advertises in the present number of the "Valley Farmer," has the best stock of Berkshires we have seen in the West. His pigs are beauties. They are from imported stock. Those wanting this breed should address him at Belleville, Ill.

## Academy of Science.

At the last annual meeting of the Academy of Science of St. Louis the President, Dr. A. Wislizenus, read the following

### ANNUAL REPORT.

Another year, the fourth of the existence of our Academy, has passed, and in reviewing it we may congratulate ourselves that our efforts and results within the last year have been at least commensurate with our means. Our meetings have been regularly attended; our museum and library have received considerable additions; there has been no want of verbal and written communications on scientific subjects, which were uniformly discussed in a most liberal spirit; and the third number of our TRANSACTIONS, more voluminous than the previous ones, and we trust equally interesting to the scientific world, was published towards the close of the year.

Our communication with other societies of similar tendency at home and abroad, has been kept up by our Corresponding Secretary with great punctuality. For the transmission of our "Transactions," for which we are greatly indebted to the Smithsonian Institute in Washington City, we receive in exchange regular files of very valuable scientific publications from all parts of the world, which may form the nucleus of a future Library of Natural Sciences. The total number of our foreign exchange list is at present one hundred and twenty-three, and that of the home list sixty-seven. In order to maintain this desirable intercourse, we are obliged to continue our own publications; but if the state of our finances should not allow us to publish every year so full a number, we might at least publish occasionally separate articles in sheets. Besides the additions which our library has received by exchange, it has been increased by private donations and by many valuable public documents, for which we are under obligations to the Hon. Truxton Polk and the Hon. Frank P. Blair.

Our museum has been enlarged by liberal donations in nearly all its departments. Thus:

**ETHNOLOGY** has received valuable contributions from Mr. B. M. Southerton, Mo.; Rev. C. H. A. Dall, Calcutta, and Dr. McPheeters, St. Louis.

**MAMMALOGY**—From Charles P. Chouteau, Esq. Dr. E. F. Marsh, Dr. Englemann.

**ORNITHOLOGY**—From Captain J. Pope, U. S. A. and in exchange from the Academy of Natural Sciences in Philadelphia. (A good number of these birds have been prepared and beautifully mounted, but we need more cases to preserve them properly.)

**HERPETOLOGY** has received additions from Drs. Englemann, McPheeters and Sanders, St. Louis, and from Dr. Wheeler, Perry county, Mo.

**ENTOMOLOGY**—Drs. McPheeters, A. Leitch and others.

**BOTANY**—Prof. E. W. Hilgard, State Geologist of Mississippi, presented a collection of about three hundred plants from the State of Mississippi.

**PALEONTOLOGY AND GEOLOGY.**—Donations were made in this department by Drs. Pope, McPheeters, Englemann and Wislizenus, Major Clark and C. Witter, Esq. and in exchange we received from the Academy of Natural Sciences of Philadelphia, some valuable fossils. For instance, bones and casts of *Megalonyx Jeffersonii*, *Dinosonis Giganteus*, *Ignanadon*, *Plesiosaurus*, etc.

**MINERALOGY** has been enriched by contributions from Drs. McPheeters, Pope, Koch, James Souland, Esq. J. Harrison, Esq. Dr. Cavanaugh (Santa Fe), and Major Clark.

**MALZEOLOGY.**—Rev. J. H. Newton presented us specimens from Panama and the West Indies; Dr. M. M. Pallen also made some additions.

The number of our associate members is, at present, about one hundred and thirty, but as many of them do not pay promptly, and the expense of our last publication amounted to a considerable sum, we are actually, as will appear from the Treasurer's report, indebted for about three hundred dollars, which sum has to be